

MANUFACTURERS' RECORD

A Weekly Southern Industrial and Hardware Newspaper.

Vol. 9. No. 15.
WEEKLY.

BALTIMORE, MAY 22, 1886.

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EUREKA PACKING

Steam, Hydraulic and Locomotive Packing,
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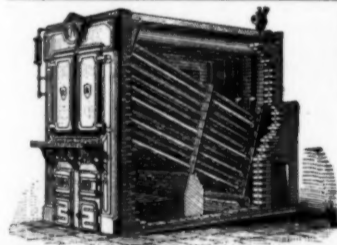
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MORSE ELEVATOR WORKS.
MORSE, WILLIAMS & CO. Successors to CLEM & MORSE
Manufacturers and Builders of HYDRAULIC STEAM, BELT and Hand-Power, PASSENGER and FREIGHT **ELEVATORS**
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Engineers, * Contractors,
—MINING MEN,—
AND OTHERS INTERESTED IN
Tunneling, Shaft-Sinking, Etc.

Engineers' Tables of Progress
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New Croton Aqueduct Tunnel
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Third Edition now Ready. Sent free on Application.
INGERSOLL ROCK DRILL CO., 10 Park Place, New York.



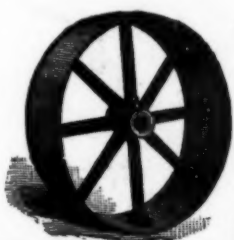
ROOT'S NEW WATER TUBE STEAM BOILER,

Safe, Economical, Durable.

Abendroth & Root Manufacturing Co.

28 CLIFF STREET, - - - NEW YORK.

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THE MEDART PATENT WROUGHT * RIM * PULLEY.

OVER 300,000 NOW IN USE. THE LIGHTEST, STRONGEST, BEST BALANCED and CHEAPEST in the WORLD.

Whole Pulleys from 9 inches to 120 inches diameter. Split Pulleys from 12 inches to 120 inches diameter. All widths of face up to 36 inches, crowning or straight, with single, double or triple sets of arms. Also Tight and Loose Pulleys. Absolute satisfaction guaranteed.

SHAFTING, HANGERS, COUPLINGS, &c.

MEDART PATENT PULLEY CO., 1906 TO 1914 N. MAIN STREET, ST. LOUIS, MO.
Stores: 99 to 101 W. Second St., Cincinnati. 24 & 26 S. Canal St., Chicago.

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SHULTZ BELTING COMPANY, ST. LOUIS, MO.

Manufacturers of Shultz Patent Fulled Leather Belting, Lace and Picker Leather.

OUR BELTING is made of Leather, tanned on the surfaces only; the interior (which is the fibre and strength of the hide) is not tanned, but Rawhide fulled and softened by our patent process. Our belting is more pliable, and hugs the pulley better and transmits more power than any other Belt. It does not pull out at the laceholes or rivets. It stretches less than any other Belt. It works equally well for the largest Driving Belts or for the fastest running machinery and smallest pulleys. OUR LACE LEATHER is made of Rawhide, by our patent process, without any tanning and is stronger and will wear better than any other. WE ALSO MAKE THE BEST PICKER LEATHER AND BELT GREASE IN THE COUNTRY. Satisfaction guaranteed.

Southern Agents—FRED. N. OGDEN, New Orleans, La.

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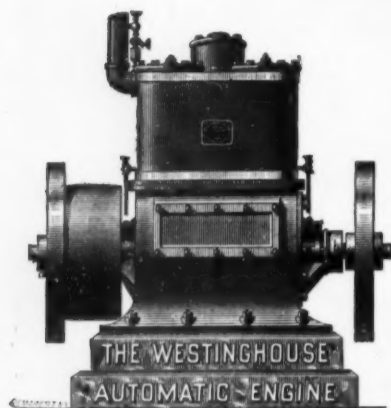
There are four indisputable evidences of the established success of the

WESTINGHOUSE ENGINE:

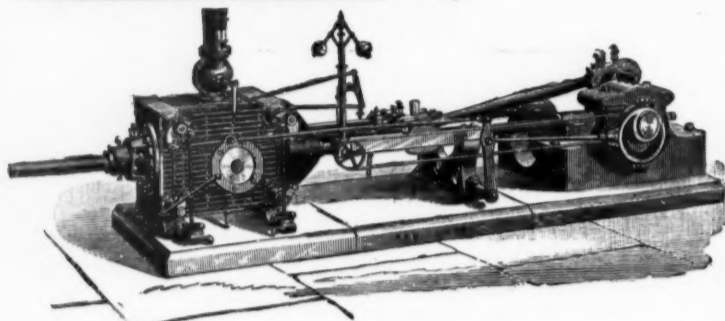
- 1st.—The volume and increase of sales, out of all proportion to any other engine in the eastern market.
- 2d.—The fact that *twenty-one per cent.* of our orders to date are *repeated orders* from actual users (not Agents), up to the 15th order.
- 3d.—The steady increase in the average size of Engine sold.
- 4th.—The persistent attempts to copy or evade our Patents, by builders of character and reputation.

5 TO 200 H. P. ENGINES CONSTANTLY IN STOCK.

We call the particular attention of Mechanics and Manufacturers to the **Wrought Bed Reynolds-Corliss Engine**, for heavy work. It will repay investigation. We are also contractors for the **Reynolds-Corliss Compound Engine**, for highest attainable economy. Also for Pumping Engines, Blowing Engines and Sewage Pumps.



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AUTOMATIC ENGINE

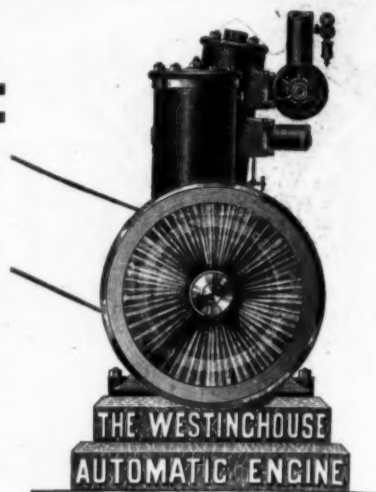
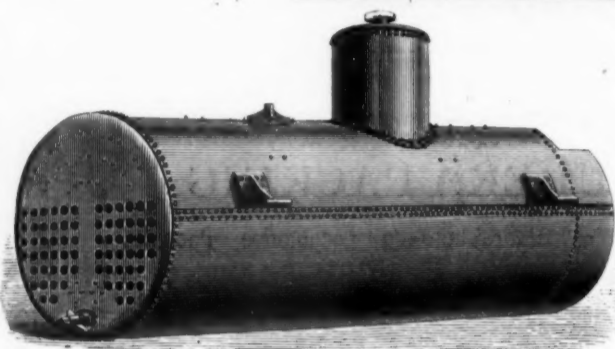


REYNOLDS-CORLISS ENGINE (Wrought Bed).

We are also
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Steel Boilers

in continuous
sheets *without*
circular seams,
up to 18 ft. in
length.



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Being "First Hands" in all that pertains to Power and Electric Plants,
we will Contract for your entire work, on a basis of **One Estimate, One Profit and One Responsibility.**

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Contracting and Consulting Engineers,

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CONTROLLING

The Westinghouse Electric Co's System.
The National Feed Water Heater.

The Westinghouse Automatic Engine.
The Morse Feed-Water Purifier.

The Reynolds-Corliss Engine.
The Smith Fans and Ventilators.

Single Sheet Steel Boilers.
The American Paper Pulley, &c.

Wiswell Ore Pulverizer and Amalgamator Combined.

The cost of this Mill is much less than any other machine of sufficient capacity to do the same amount of work.

It requires less power to run it, (10-horse being sufficient.)

The wear and tear of the Mill is much less than any other Quartz Mill doing the same amount of work, and the quality of the work done by it is greatly superior to work done in any other Quartz Mill now in use.

It crushes to a uniform fineness and makes no slimes, so that no sizing is required for concentration.

The Mill is equally well adapted to crushing and pulverizing of all classes of ores, either for amalgamation or concentration, and will pulverize and amalgamate from one-half to one ton per hour, according to character of ore and fineness of screens.

With ordinary care there is no loss of mercury by flouing, and consequent loss of gold, as in most other Mills where mercury is used in the Mill.

Amalgamation is carried on in the same operation with the crushing. The mercury is placed in the Mill in quantities varying from 10 to 40 pounds.

The application of electricity to the Mill for the purpose of cleaning and keeping the mercury alive has been to a very large extent superseded by the invention and introduction of the Mercury Trap in the Mill for the purpose of drawing off the mercury when charged with gold or on the slightest indication of flouing. By this ingenious device the mercury can be changed as often as desired without loss of time in either crushing or amalgamating. By opening this Trap the amalgam is discharged from the Mill in three minutes, and clean mercury introduced in its place.

To those familiar with running a Gold Mill this latter advantage will be greatly appreciated; in fact, it gives the mill-man full control of his work.

This Mill has been on exhibition at the foundry of Messrs. Bisbee & Endicott, at Chelsea, Mass., for the past 18 months, a good part of the time in active operation, and we have treated the most rebellious ores from many mining districts with most satisfactory results to the parties concerned.

The past year we have sold many Mills, which may be found in Michigan, North Carolina, Dakota, Montana, Idaho, Colorado, California, Mexico, Nova Scotia, etc. All those in operation are giving the most perfect satisfaction, as testimony will prove, and we will take pleasure in referring to any one of these on application.

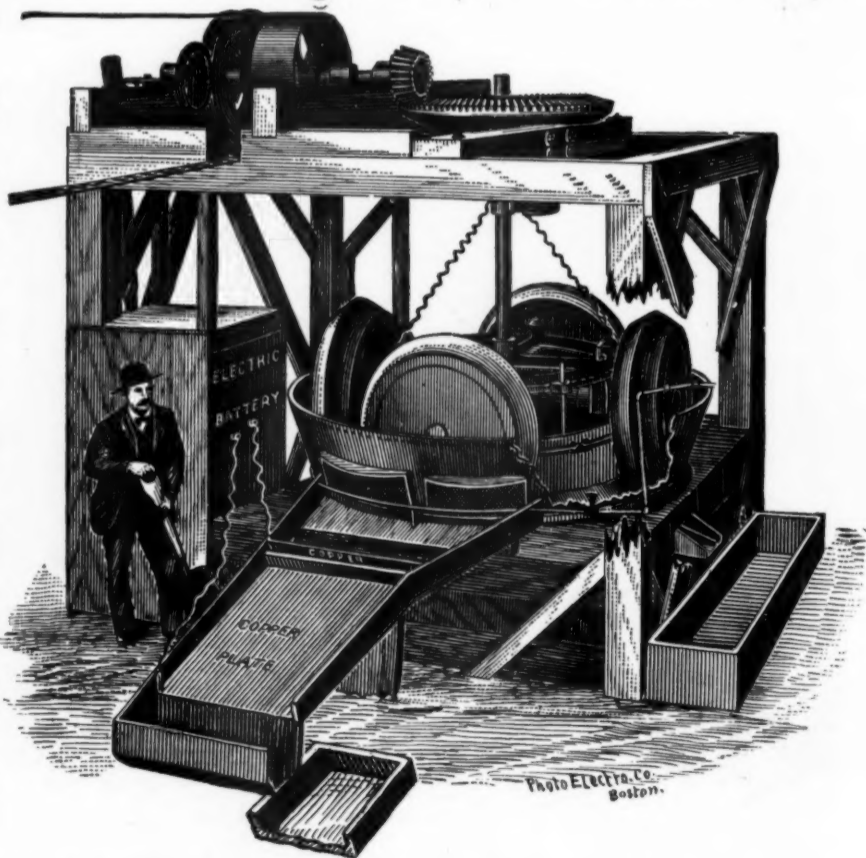


Photo Electric Co.
Boston.

We Furnish a Complete Mill for **\$2,500**, Delivered on Board Cars.

WISWELL ELECTRIC MINING MACHINERY COMP'Y,

A. A. REEVE, Treasurer.

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Formerly Myron Fish & Co., of Valley Falls, R. I., and Kendrick Loom Harness Co., of Providence, R. I.

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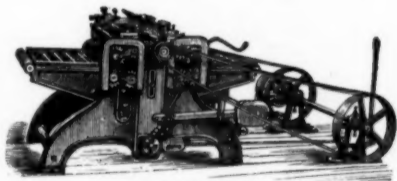
3002 Chestnut St., PHILADELPHIA.

11 and 13 S. Canal St., CHICAGO.

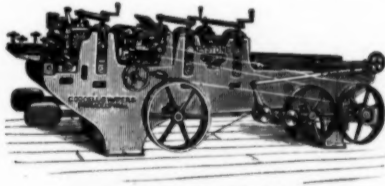
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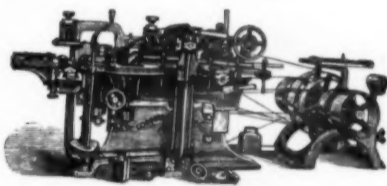
IMPROVED WOOD-WORKING MACHINERY.



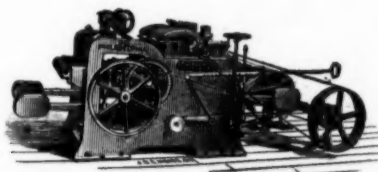
No. 2 Single Surfer.



Keystone Flooring Machine,
Surfacing 100 lineal feet per minute.



9-inch Moulder.

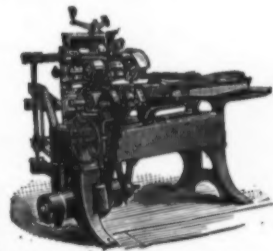


The "Philadelphia" Endless Bed D. S.

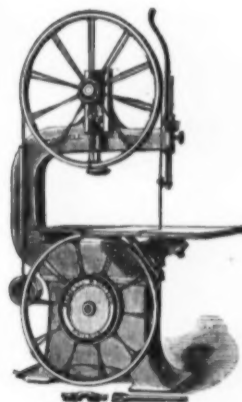
"KEYSTONE" FLOORING MACHINE,

Of which over **TWO HUNDRED** have been sold during the past Two Years.

—SEND FOR CATALOGUE, AND MENTION THIS PAPER.—



Modern Tenoning Machine.



42-inch Band Saw.

Every Machine is thoroughly
tested before leaving
the Works.

GOODELL & WATERS, 3002 CHESTNUT ST.,
Philadelphia, Penn.

All our machines are war-
ranted as represented.

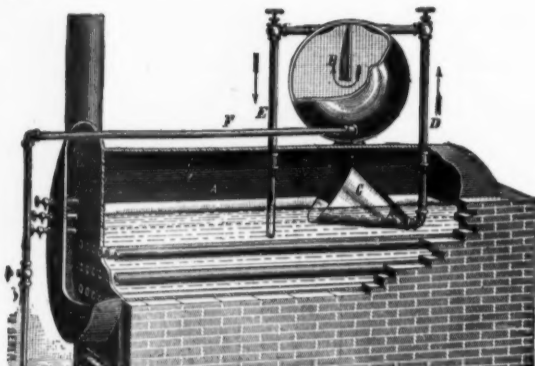
FIRE

The Hotchkiss Mechanical Boiler Cleaner

STEAM

Removes from Steam Boilers, Lime, Oil, Magnesia, and all other impurities of Boiler Water, and prevents Scaling, Foaming and Burning; but the object of this advertisement is to warn you against an INFRINGER named H. ESTELLE and his agents, who have been selling without patent or

license from me, Boiler Cleaners, as shown by the cut on right hand side below. I take this method of informing the public in order that they may not further be deceived, as on August 4, 1886, a patent issued to H. ESTELLE for what he claims, as given in full with cut on right hand side below the cut, showing the HOTCHKISS CLEANER complete, except the shape of the Skimmer, which is an equivalent for my Funnel Skimmer.



The Hotchkiss Mechanical Boiler Cleaner.

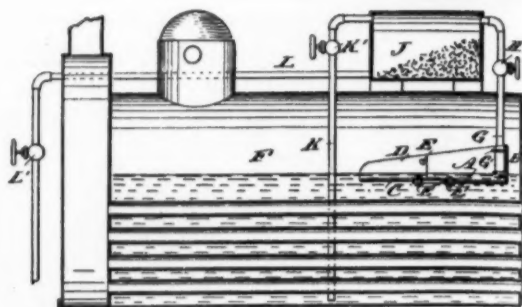
CLAIM 1. The method of collecting impurities from the water-level of steam boilers, raised thereto by ebullition, by carrying them beneath said level and upward into a reservoir with an ascending current induced by the displacement of a cooler body of water in said reservoir, and depositing the impurities therein by precipitation, substantially as specified.

CLAIM 5. A bell-mouth or device having an enlarged receiving area for gathering the sediment, and suspended within the boiler by means of a pipe extending into the same from the upper shell thereof, the said bell-mouth and pipe constituting the induction channel for the upward current, carrying the sediment, combined with a reservoir and a return-pipe leading from the same to the boiler water, the whole forming a means of circulation for the boiler water, and for removing impurities therefrom, substantially as herein set forth.

"How to Keep

BOILERS

CLEAN"



[Cut and Claim Copied from Patent.]

Having thus described my invention, WHAT I CLAIM AS NEW, and desire to secure by Letters Patent, is—

1. The combination, with the settling-drum J, of the pipe G and the skimmer A, provided with an extension-plate, extended laterally, as shown, at its front edge, substantially as herein shown and described.

2. The Combination, with the settling-drum J, of the pipe G, the skimmer A at the lower end of the same, which skimmer has a flange, B, and the extension plate C, held by bolts on the front edge of the skimmer, and having end flanges, substantially as herein shown and described.

HENRY ESTELLE.

You will observe that my claims cover a METHOD of removing impurities from the water of steam boilers, together with an apparatus for producing that effect, which, since the grant of the original patent have, without warrant, been extensively used and sold by certain imitators of my invention. All parties making, using or vending the apparatus in question, or any apparatus substantially the same in principle and mode of operation, together with all parties using the METHOD claimed, regardless of the construction of the apparatus employed, are **Hereby Notified** that they are infringing my said letters-patent 1877 1883; and that a full accounting for moneys derived from such infringement will be required, and that my rights will be enforced, if necessary, by legal measures.

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JAS. I. HOTCHKISS,
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SCALE



Wood Split Pulleys.

MILBURN
Gin & Machine Co.

MEMPHIS, TENN., U. S. A.

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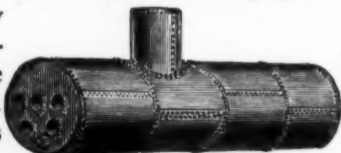
STEAM ENGINES, BOILERS,

(Made by the Tweedle system of hydraulic riveting),

Cotton Gins, Gin Feeders and Condensers,

And the Celebrated "INDEPENDENCE" Wood Split Pulley, with Bushing System.

The best and lightest Pulley made. Every one guaranteed. Send for catalogue, testimonials and price-lists. We have the largest works of the kind in the world. Will send one of our Wood Split Pulleys



to any responsible party, for thirty days' trial, free of charge, if it fails to meet our warranty.



MILBURN SLIDE VALVE ENGINE.

Milburn Gin
& Machine Co.

Send for Illustrated Circular and Price-List.

E. W. BLISS CO.

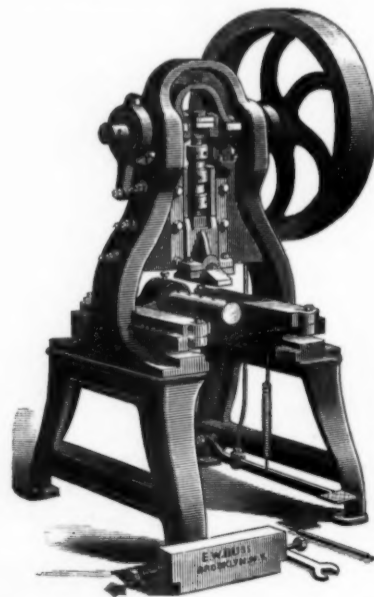
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Presses, Dies,

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SPECIAL MACHINERY

FOR WORKING SHEET METAL.



Double Seaming Machines, CIRCULAR SHEARS, Squaring Shears, Can Making Machinery, &c.

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RILEY & GRAY,

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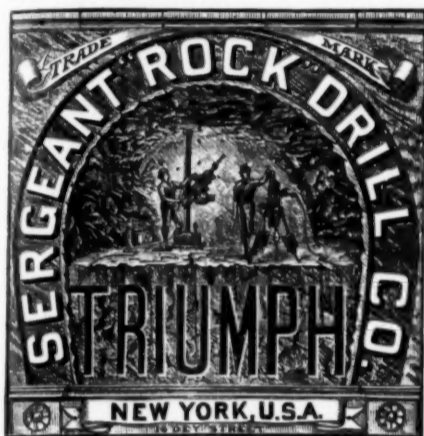
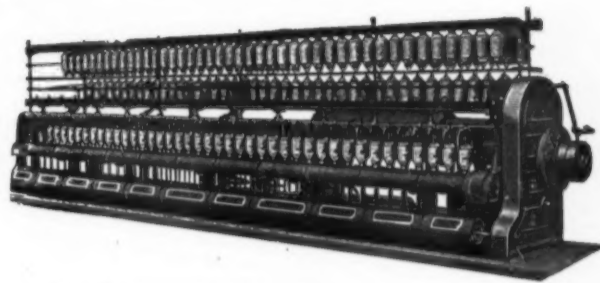
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and NORWALK AIR COMPRESSOR

Are the Latest and Most Improved Machines that were ever designed for the work required of them. They are the Most Simple, Economical and Effective now known, and will satisfy all Purchasers.

Boilers, Steam Pumps, Hoisting Engines, Pipe and Fittings, Electric

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Complete Specifications for Rock Drilling and Mining Plants Furnished on Application.

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LOCOMOTIVES FOR ALL KINDS OF SERVICE

Blast Engines FOR IRON & STEEL WORKS

BESSEMER STEEL PLANT MACHINERY

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HIGH PRESSURE, CONDENSING & COMPOUND, HOISTING ENGINES

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COAL & PHOSPHATE BREAKERS WITH PATENT REMOVABLE STEEL TEETH

SCREENS & VENTILATING FANS

PUMPING ENGINES OF HIGH DUTY TYPES

CORNISH PUMP ENGINES, PUMPS, VALVES

BOILERS OF EVERY KIND & SIZE

HANGERS, SHAFING & PULLEYS

GEARS BOTH CAST & CUT

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The Only Method for Preparing the Ore for Amalgamation.

Disintegrating, Decomposing and Desulphurizing the ore under a HIGH TEMPERATURE and PRESSURE OF STEAM HEAT, with chemical action and attrition, dissolves and breaks up the chemical combination in the ores, individualizing, cleaning and separating the atoms of metal from the gangue, perfectly freeing them for amalgamation in combination with the MEECH AMALGAMATION MACHINE and process, (being the greatest combination of Amalgamation known,) will successfully extract 90 per cent. of the metal from rebellious ores, such as Sulphurets, Sulphates, Sulphides, Chlorides, Bromides, Oxides, Tellurides, &c.

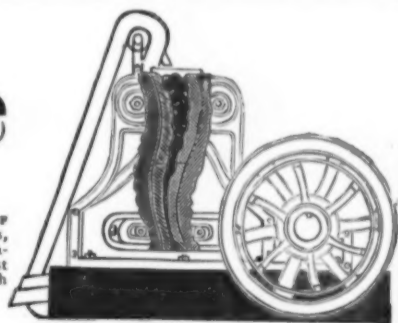
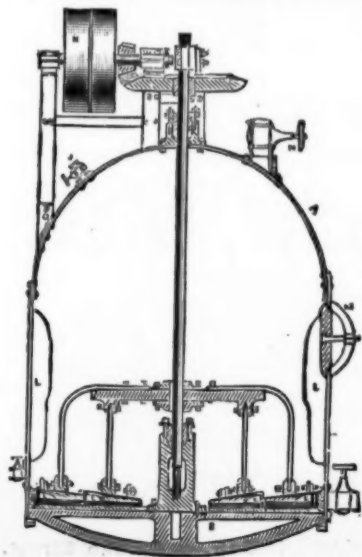
We desire business correspondents in every mining district in the United States.

THE MEECH CRUSHER & PULVERIZER.

This Machine will CRUSH AND PULVERIZE GOLD AND SILVER ORES to 20, 40, and 60 mesh fine, and from 20, 40 and 60 tons per day. The principles of this machine, making it superior to all others, are the peculiar concave and convex shape of the jaws, with concave and convex projections, which breaks, crumbles, stamps and pulverizes the ore with less power, wear and tear, than any other machine. MANUFACTURED BY

MEECH & CO., Cleveland, Ohio.

We will contract to erect the Meech Plant of Mining Machinery for successfully treating all grades of gold and silver ore.



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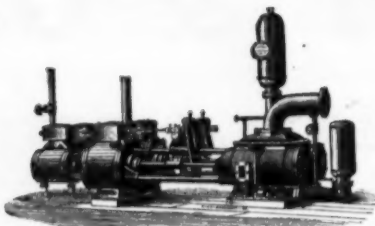
—HOLYOKE, MASS.—

BUILD

STEAM * PUMPING * MACHINERY

OF EVERY VARIETY.

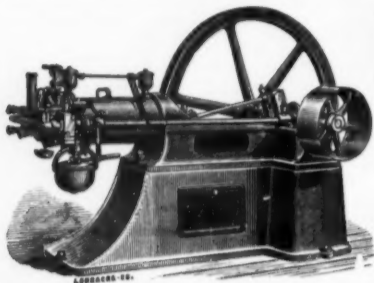
Send for New Catalogue No. 22.

**The DEANE STEAM PUMP CO.**NEW YORK, BOSTON,
CHICAGO, PHILADELPHIA, ST. LOUIS,

MAKE A SPECIALTY OF

Water Works ENGINES

FOR THE SUPPLY OF CITIES AND TOWNS.



Over 18,000 in Use.

Otto Gas Engine

30 to 70 per ct. less Gas consumption than ANY OTHER ENGINE.

Working Without Boiler, Steam, Coal, Ashes or Attendance.

Started instantly by a Match, it gives full power immediately. When stopped, all expense ceases.

No explosions, no fires nor cinders, no gauges, no pumps, no engineer or other attendant while running. Recommended by insurance companies. UNSURPASSED IN EVERY RESPECT for hoisting in warehouses, printing, ventilating, running small shops, &c. Sizes: 1 to 25-Horse power.

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Roving Frames,
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Double Adjustable Spinning Rings.
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Lever Screws for Roving and Spinning Frames.

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Manufactory at Newark, N. J.

T. G. SELLEW,

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Fine Cylinder and Roll Top Desks a Specialty.

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OUR BIRMINGHAM LETTER.

The Condition of the Iron Trade. The Future of the Alabama Iron Trade.

[Special correspondence MANUFACTURERS' RECORD.]

BIRMINGHAM, ALA., May 17, 1886.

It would be foolish not to admit that the labor troubles have affected this district. They have, but in a most indirect way. To date we have not had any labor troubles, and there is not any just reason to predict that we are to have any. The relations between employers and workmen are pleasant and satisfactory throughout the region. But the agitation East and West has disturbed the iron market, and I dare say that figures would have to be cut if any large sales were proposed to-day. Western demand has dropped off considerably, and Eastern demand not so much so. In both cases there are evidences that customers are only waiting to see how the cat may jump to go in again. Thus, one of our leading furnaces had a telegram from the East asking what No. 1 foundry could be had at for next week's delivery in lots of from 500 to 2,000 tons. Without taking the trouble to itemize such propositions, it is safe to state that all our furnaces are the recipients of the same kind of enquiries. Although the market is dull for the time being, prices are stiffly maintained, and no change is to be noted from the report of last week.

It would be difficult to impart to your readers a fair idea of the progress of the Mississippi valley as it appears at this place. Everybody knows the mineral resources of the valley. The world is even beginning to concede that the greatest deposits of Bessemer ore are to be found here! Yet it seems hard for our friends in the East, North and West to admit that there is anything in the South calculated to change the centre of national industry. All the same, it appears that the Alabama mineral district is probably capable of supplying all the iron and steel products necessary for the consumption of the valley and for a large export trade. Sir I. Lothian Bell said fifteen years ago that this district of the South would one day compete with the world, and England especially, if we could ever get cheap transportation to the salt water!

This prediction, which has passed into industrial history, and which has been a kind of bugaboo to the old manufacturing districts of the country, is none the less likely to become true. Give us as cheap access to the Atlantic or the Gulf as the interior of the North Atlantic States has, and we will indeed challenge English iron in the markets of the world, and, it is possible, in the markets of the United Kingdom.

A year or two ago everybody was ready to laugh at the impudence of the Birmingham district in assuming to be even a possible factor in the general iron life of the nation. To-day the iron men of the East are doing their best to get in here. They have waited too long, as a rule, and there is little for them to get. The few people who are on top and have valuable ore lands to sell are sought as few are sought even in the field of real estate. And the same applies to coal lands. Up to within a few days the only really get-at-able large body of coal lands within many miles was proposed for at full prices by an English syndicate. The price is not known, but the offer is said to be the largest ever made here. The aggregate of the territory is placed at 200,000 acres of land.

But all this development needs an outlet, and, under modern conditions, a railway outlet. It is all very well to discuss the im-

provement of questionable inland streams. As an adjunct to railway improvement these interior waterways may be a good thing, but they do not make a country situated as this one is. I have been severely criticised because I hold that it is foolishness to talk of the Warrior river as a sufficient outlet to tidewater for even a moiety of the output of the Warrior coal field. For limited purposes between local river points the stream in question may very likely be made available, but as a solution of the question of cheap access to tidewater for the coals and iron of this region, water transportation is next to nonsense, in my opinion.

Birmingham is on a straight line terminating at Pensacola, and from here to that point it is a uniformly down grade. The Louisville & Nashville Railroad traverses the entire line, opening up the connection in the best way. A very little encouragement on the part of local capitalists would be sufficient to promote the establishment of a line of steamers between Pensacola and Havana, and it only requires additional harbor facilities to bring about the shipment of large quantities of Alabama coal to the West Indies. Everything points to the development of Pensacola as a great coal and iron port, and to its establishment as the Philadelphia of this Pittsburgh.

G. B. WEST.

Interesting Facts About Savannah.

[Special correspondence MANUFACTURERS' RECORD.]

SAVANNAH, GA., May 11, 1886.

Savannah was settled in February, 1733, by Oglethorpe. The Chatham Artillery, which celebrated this week its centennial in that city, is the oldest organization in Georgia. They invited military companies from the North as well as from all parts of the South, and right royally have they sustained Savannah's reputation for Southern hospitality. The Chathams number only about 50 men now, but they entertained whole brigades of military with princely hospitality, and it has been estimated that about \$60,000 have been expended by this gallant little band of veterans for the comfort and entertainment of their guests this week.

This grand old city, always beautiful, looks unusually attractive now. Her exquisite parks, filled with shrubbery and flowers, monuments and fountains; her broad streets shaded by old and immense trees, whose aged and moss-covered limbs form a grateful shade from the sun's hot rays; her large and imposing buildings, from which float every colored flag of every nation; her palatial mansions crowned with roses rare and fragrant, which hang in graceful festoons from open windows; verandahs bright with tropical flowers and bolts of red and blue bunting and ribbons, all enhance the beauty of this lovely city, this queen city of the South. But her soft sea breezes, heavy with the fragrance of the magnolia and cape jasmine; her stately residences and beautiful parks, that are the play-ground of prattling children and innocent babyhood, these are not the only features of this city by the sea. The whole country around Savannah is dotted with truck farms, and the gardener here is enabled to sell his produce at fancy prices North and West, owing to the fact that vegetation in this climate is in a far advanced state before the snow has gone from the bleak hillsides up North. Here are fine openings for gardeners to come and settle. Land is cheap, and shipments of fruits and vegetables large and profitable. The amount in watermelons alone to New York, Boston, and the various other markets, amounted last year to about 800,853; oranges, lemons, etc., 241,693 boxes; vegetables, 406,230 packages.

Savannah is the largest lumber and naval stores port in the South, and as early as 1847

it employed 200 vessels of all sizes to transport its lumber, tar and turpentine to all parts of the world. The yellow pine of Georgia is the most durable and beautiful of all resinous woods. It is different from the North and South Carolina pines, its grain being closer and finer, and the resinous matter being more incorporated with the wood and more difficult to extract by water or atmospheric agencies. The Georgia pine is used extensively in the construction of vessels and for flooring purposes. The trade for the year 1883 amounted to about 50,956,691 feet of timber. We find from an able report, furnished by the Savannah News in its September issue, a wonderful increase in the turpentine and rosin trade. Receipts ran up on spirits of turpentine from 77,059 casks to 116,127 casks, and of rosin from 309,834 barrels to 430,548 barrels, an increase of about 50 per cent. on spirits and 40 per cent. on rosin, the difference in the rates of increase in the two articles being caused by the fact that spirits have been closely marketed while some rosin is still in the country. The people of Georgia are fully alive to her enormous lumber interest, and here it may be said that unless some practical plan is adopted to prevent it, one-third of the taxable property of Georgia will soon be lost. The devastation of turpentine operators is fearful.

The rice market has declined, owing to the fact that Sandwich Island rice has been allowed to come in free, and a reduction of duty has been made on foreign rices of about one-quarter cent per pound. The total yield of the crop in Georgia for the last year was 74,000 barrels. Savannah was for a long time kept back by the need of facilities for transportation, and although she has many other avenues now through which she can receive and dispose of her commerce, she was first indebted to Col. Wm. M. Wadley, who planned and built the Georgia Central Railroad, the oldest line Savannah has. This road connects in Atlanta with all North and Western trains, and passes through the finest cotton sections of the South. Since Col. Wadley's death, this line has been managed by his son-in-law, Capt. Raoul, whose able management and untiring energies have well executed and carried out the colossal plans of his predecessor. Savannah owes a debt of gratitude to Col. Wadley for the planning and building of this reliable and expensive road, and while a monument has been erected to his memory in Macon, it would be a fitting tribute to place a Wadley monument in one of Savannah's beautiful squares. This might well be called a monumental city, for there are monuments to Pulaski, Jasper, Green, Gordon, and the Confederate monument, erected in the various parks. Many thousand of dollars have been expended in adorning these grounds, which nature herself did much for. The oldest and best established paper in the city is the Savannah News. It is owned and edited by Col. J. H. Estill, who has owned and run it for the last 17 years. There are over 100 hands on the pay roll, whose weekly salaries amount to \$1,400. The paper is valued at about \$150,000. Such men as Col. Estill, and such papers as his, should be well sustained by the people. There is also a spicy evening paper edited by Mr. B. H. Richardson, whose energies and ability have well established his journal. E. B. A.

THE Carnegies, of Pittsburgh, have bought land within the city limits with a view of erecting two of the largest and finest blast furnaces in the world. They are putting up one of the largest heating furnaces in the world in one of their Pittsburgh mills. Their Homestead Mill is turning out 125,000 tons per year, their Edgar Thompson plant is turning out 200,000 tons, and their other two mills 100,000 tons each, making a total of 525,000 tons. They have seven blast furnaces in operation—five at Braddock, 12 miles east, which are turning out 250,000 tons, and two Lucy furnaces 100,000 tons. They need two more, and propose to erect them this season, and make them embody the very latest and best improvements in blast furnace practices.

Truck Farming in North Carolina.

[Special correspondence MANUFACTURERS' RECORD.]

NEW BERNE, N. C., May 14, 1886.

A few days since a small party went from this city to Riverdale, on one of the steamboats of the Old Dominion Line, which navigate these inland seas. Riverdale is the name of an extensive property fronting the Nuese river, about ten miles below this city. On the bank stands a large mill, from which a long wharf runs out to deep water. Landing on this, we soon reached the shore, and taking the wagon road we walked up a slight ascent, then were conducted into the grounds of the proprietor. Here was a pretty cottage some yards from the river front, between which and it is a grassy lawn. Tall trees line the bluff, which is some fifteen or twenty feet above the water. At the center under these trees is a rustic arbor, from whose benches there is a beautiful outlook upon the broad placid stream. After enjoying this for a while, the owner took us into his garden, and then into his fields. In the first we saw fine early peas ready for picking, gladiolas and other flowers in bloom, peaches somewhat larger than hazel-nuts, Sharpless strawberries to which we were told to help ourselves, (and we required no urging,) peas of a fortnight's growth from the blossoms, grape vines in full foliage and bloom. In the fields, besides a variety of vegetables in different stages of growth, we were shown grass and clover. The red clover was in full bloom, and the stalks averaged two feet in length. The soil near the river was a stiff gray clay. Beyond it was a vegetable mould, resting on a clay subsoil.

All the cleared land under cultivation demonstrated the great fertility of the soil, while the dense undergrowth and lofty trees of the adjacent woodlands indicated equal richness. On this property near the mill is an artesian well having a depth of 90 feet, from which flows the most limpid water I ever saw. This water was analyzed some years since by Dr. C. W. Dabney, the chemist of North Carolina's Board of Agriculture. It was found to be strongly impregnated with the carbonates of lime and iron, and to contain traces of magnesia, chloride of soda and other chemicals. No effort has ever been made to bring this water to public attention, although it has somewhat of a local reputation as a remedy for dyspepsia and constipation of the bowels. The specific object of this party was to escort one of Burnside's veterans to the battlefield below this city, which is about midway from here to Riverdale. When the latter was left, the party rode out to the county road over which General Foster's brigade marched, and followed it to the entrenchments where the fight occurred, and then to this city. The veteran was astonished at the changes since 1862. "I don't know the country," he said. "Then on both sides there were dense woods, acres of swamps and marshes, and almost no human habitations in sight from Slocumb's creek, where we landed, until we came in sight of New Berne. Now the land has been cleared and drained, the fields are as a rule under high cultivation, and there are many neat farmhouses. What has done it?" "Truck, mainly," was the reply. "Most of these farmers raise early stuff for Northern markets, besides cultivating corn and cotton and rearing hogs." We stopped at one house whose owner entertained us hospitably with home-made Scuppernon wine three years old of fine bouquet. The entrenchments are overgrown with trees and shrubs and surrounded by cultivated fields. The veteran tried to locate the spot his regiment occupied in the battle, but could only guess at it, and consoled himself by saying, "It's much pleasanter to visit this place on this bright day accompanied by native-born citizens, than it was to be one of a crowd feeling our way cautiously through the thick woods in 1862, not knowing what moment

we might hear the singing of hostile bullets about our ears."

Northern settlers are locating at many places between New Berne and the ocean. Among the latest settlers are two gentlemen from Sterling, Conn., who have bought an extensive tract of timber on Slocumb's creek, and are erecting a saw mill and other buildings there.

Another Connecticut man is now in Onslow county for the purpose of examining a considerable piece of woodland where deer are abundant. If suited in all respects he intends to purchase, that he and his friends may have a fine deer preserve for their winter sporting. At first thought the purchase of a tract of land for shooting purposes may not seem to bear any relation whatever to the development of that particular section, but it does have a most important influence in that direction.

People who make such purchases, and their friends, have wealth and leisure. Before many seasons of occupancy they almost invariably see and improve opportunities for investments, while at the same time they leave annually a good deal of money in their immediate vicinity. Should this purchase be made it will help forward the scheme the moneyed men of Wilmington have long had under consideration, viz: the construction of a railroad between that and this city. While here, to deliver the address of Confederate Memorial Day, Mayor Hall, of Wilmington, said there was no doubt but that application would be made to the legislature next January for a charter for a railroad between the two cities, and that it would be built by Wilmington capitalists. They wish that line that they may control the fisheries of New River, and other waters and streams between these and Morehead City, and also get a much larger proportion than at present of the cotton, corn and other agricultural products of all the country south of Roanoke Island. Should this plan be carried through it would provide for the necessity stated at length in my letter from Trenton, besides putting New Berne in somewhat the same relation to the territory bordering these great inland waters that Chicago bears to that bordering on the Western lakes. B. S. P.

A Big Coal Mining Scheme.

CLOVERPORT, KY., May 14, 1886.

Editor Manufacturers' Record:

There are many undertakings throughout the world that have no real basis, and exist mostly in men's minds or on paper, but our concern means business, and when we do get into full operation we will be proud to let the world know about us. All I can say now is that this company has made a contract with an English syndicate, who have formed a company styled the "Breckenridge Company" (Limited), with headquarters in London. This contract is nearly completed, by which this magnificent property will be fully developed. The English company is one of the strongest ever organized in London, and it has so far furnished the money required to start our work. We have 9 miles of railroad now in complete running order from the Ohio river below Cloverport out to the mining village of Burnettsville. The road is first-class; 50-lb. steel rails; standard gauge. We have in the course of construction 30 cottages, a hotel and a store. All the necessary improvements for running a first-class mine are being done. We find abundance of labor. Have a saw mill sawing our own timber at the rate of 10,000 feet a day. In one setting of the mill we got 400,000 feet within 1,000 yards of the mill. The fifteen adits to the mines are being put in order, track laying, &c. Dump being constructed, and we hope to be able to ship coal by the first of June. All the necessary improvements are also being made at the river for the shipment of the coal, which is the celebrated "Breckenridge

Cannel," which, according to the analysis of the best experts of this country and Europe, is the finest that has ever been discovered. The company owns 7,220 acres of land, and the coal bed lies under 4,000 acres of the track. The seam will average 36 inches, and is of a very rare uniform thickness. The air and drainage is perfect, and this coal can be mined cheaper than any other and sold for higher prices. We are now offered contracts for the coal at \$15.00 per ton of 2,000 lbs. delivered in London and Paris. New York offers \$12.50, but I opine they will give more when they come to a trial of it. We can mine and deliver this coal in London for \$8.00, or perhaps less, giving us a clear profit of \$7.00.

As soon as our canal is in full operation, we propose extending our road into a bituminous coal field back of us, and also utilizing our timber by the erection of manufactures,—and the future of this place promises well.

I have had great trouble in inducing foreign capital to come into the South, but now having driven the entering wedge, I look for most favorable results.

WM. JOHNSTON, Supt.

BRECKENRIDGE COMPANY (Limited).

What the Free-Trade Press Is Doing.

The Nashville Union, a vigorous champion of the South's need of a protective tariff, makes a suggestion which some of the free-trade editors of the South would do well to ponder. The Union says:

The free-trade press of the South, in its misstatement of the manufacturers' profits, and by its personal warfare on every man who has the pluck to go to manufacturing, arraigning him before the laboring people as a robber—as he is if the American's statement is correct—is actually the worst enemy the South has. The bloody-shirt crowd of the North are not doing half as much to damage us. The man who has accumulated some capital looks into the business of manufacturing. He finds that by strict attention to business, with sufficient capital, making no mistakes in the employment of agents, he can make interest on his money. It may be 8 per cent. But he says I am, if I go into manufacturing, to be put in a class called by the newspapers robbers. It will be said to my employees that when they make \$2, I will take as profits more than half. My employees will of course become dissatisfied, get up strikes, and so I cannot go into the business. Surely this war on manufacturing industries struggling to live ought to stop. The South is making a heroic effort to get on its feet by diversifying our industries. Will not the free-trade press stop its fight on these young industries?

A Successful Railroad President.

The importance of a thorough technical education for the young men of the South has frequently been urged by the MANUFACTURERS' RECORD. In the future, far more than has been the case in the past, there will be many openings in that section for men of mechanical and scientific training. The great railroad and manufacturing interests of the South will offer a wide field of profitable employment to men of the highest skill and education. The Lynchburg Advance in discussing this subject, says:

"We are led into this train of thought by what we have just read in the Valley Virginian about one of Virginia's best and most successful citizens and railroad men,

who, though born in prosperity and plenty, nevertheless made a practical mechanic of himself when young, and by the advantages thus acquired has made his mark in the world as one of our most successful and useful citizens. We allude to Mr. John M. Robinson, one of our most noted railroad men for many years, whose father was a railroad man before him. Mr. Robinson is now president of the Carolina Central Railroad, the Raleigh & Augusta Railroad, the Seaboard & Roanoke Railroad, and the Baltimore Steam Packet Company. When quite a young man his father placed him in a machine shop as a regular apprentice. After learning what he could there he went to Paris, and there served for three years in the most extensive and complete of the shops of that great city, and returned to Virginia a master machinist. During the war he was assigned to staff duty as an engineer, and while traveling from Richmond to Danville the usefulness of his knowledge was brought into requisition. The engine of the railroad got out of order. The engineer examined it carefully, but could not discover where the fault was, and the prospect was that the train would remain where it was until another engine could be procured. In this emergency, Mr. Robinson, who was a passenger, pulled off his coat, crawled under the engine, and, turning on his back, carefully examined the intricate machinery of the engine, finally called for a wrench, and after using that, asked for a hammer and cold chisel, and after applying that as the necessity of the case required, he came out and told the engineer to prepare to start. Scarcely had the anxious passengers time to get aboard before the iron horse moved off, as a thing of life, in complete order, and the trip was made without further delay or obstruction. The knowledge Mr. Robinson acquired in the shops not only served a good purpose in this emergency, but has made him one of the most successful railroad men in the United States. Every enterprise with which he has been associated has been eminently successful. His training has been such as to acquaint him with all the wants of a railroad or steamboat, and to give direction when necessary to have them supplied. And this would not be the case but for his early mechanical training, nor if he had simply studied the scientific part of a profession.

Now if all our young men were made to learn a trade or business of some kind, to which they appear best adapted, it would give honor and dignity to all kinds of labor, as God in His wisdom and laws intended, and under any press of circumstances or misfortune would make every one felt in the community and useful to himself."

The Cotton Mills of Columbus.

Columbus, Ga., is one of the centers of cotton manufacturing in the South. It is the home of the largest mill in the South—the Eagle & Phoenix—which is also one of the largest in the country. This enormous mill, running over 49,000 spindles and 1,486 looms, gives employment to 1,600 hands. It is gratifying to know that business is very brisk at this mill, and that the orders for goods are ahead of production. The Enquirer-Sun, of Columbus, contains some points of interest regarding this mill, furnished by Mr. Young, the treasurer, who says:

"Just now the demand is greater than the supply, though we are doing our best to fill all orders. Many of our styles and brands of goods are sold far ahead. We sell our goods direct from the mills through our traveling salesmen, and the products are sold in such far distant points as Boston, New York, Philadelphia, Omaha, San Francisco, in all the large States of the West and in every Southern State.

Experts tell us that our products are equal to the best made in the world. The mills manufacture the best goods of the kind,

which have a reputation for quality and appearance, and no better evidence can be given of this than the continuance of orders from the same parties and extending our sales to all sections of our country.

The production books for last year show upwards of one hundred different weights and styles of goods manufactured, while the patterns in a great majority of them are so numerous and varied that their number would be difficult to aggregate without much waste of time.

Our mill is equipped with 49,180 spindles, 1,486 looms, with woolen, cotton, rope and twisting machinery. The company employs 1,600 people, who represent a direct population in the city and suburbs of between five and six thousand persons. This, besides many officials, salesmen and others connected with the mill. This increase of population has in turn brought new merchants, more trade, artisans, mechanics and traders to the city, all to spend the greater portion of their earnings amongst us, to increase the value of property.

In summing up the nine years circulation of money by these mills since the completion of No. 3 mill, and exclusive of money paid out for its construction, the aggregate is considerably above \$9,000,000. The farmers, wool-growers, warehousemen, foundries, lumber merchants, insurance agents, city and county operatives, merchants, real estate owners and others all share in its benefits. No money is included in this nine million dollars as put in circulation by the payment of dividends during this period, which aggregates \$700,000.

We are now running as full as possible. It is the only way to run such an enterprise. It is either to run full or stop entirely, when you are realizing on the goods anything in excess of the cost of labor and raw material. Thus you earn all that is possible towards paying fixed charges. I am glad to say that there is no doubt in my mind as to this policy now, for though we had a hard rub during the past summer on high cotton and frightfully low prices on our products, yet to-day, with low cotton and better prices for products, I feel that we are at least earning all of our expenses, and I think I can see our way in the near future to doing better."

Mr. J. M. Williams, the secretary of the Swift Manufacturing Co., stated to the Enquirer-Sun, that as a rule, the cotton mills throughout the country have all been sorely pressed during the past two or three years. The outlook is more encouraging at present, and it is confidently expected that there is a brighter day just ahead for manufacturing industries of all kinds.

"The signs of improvement are: The increased demand for products and better prices that are maintained. As for ourselves we have on hand a smaller stock than for some time.

We make several lines of goods. We manufacture checks, plaids, cottonades and things of that kind in different styles. Then we make the celebrated Mitcheline bedspreads that you hear so much talk about, and our mill is the only one in the United States that does make them. We are also getting out window curtains, or portieres, that look as rich as damask. Then we make table covers, towels and many other things of that character.

We make no yarns at all, though we have the capacity of putting in ten thousand spindles. We have 254 looms upon which we manufacture our checks, cottonades, etc., and 30 broad looms, double as wide as the others, for the manufacture of bed spreads, portieres and things of that kind. This gives us an aggregate of 284 looms, and we consume 3,500 pounds of cotton yarns—equal to eight bales of cotton—per day.

We have about 250 in our employ, besides those connected with the office. Of these about 185 are females, the others being men and boys. They are industrious and seem well satisfied."

CONSTRUCTION DEPARTMENT.

WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

ALABAMA.

W. J. Gregg will erect a \$7,000 building at Birmingham, Ala.

A company will be chartered at Birmingham, Ala., by J. C. Westbrook, Messrs. Jones, Torry and others, to build a street railroad.

It is reported that Veasy & White will establish a large factory at Birmingham, Ala., for manufacturing grates and mantels.

There is talk of a spoke and handle factory being started at Warrior, Ala.

The Seaboard Manufacturing Co., Mobile, Ala., will move a large part of their machinery to an island opposite their present works.

C. M. Smith, of Covington, Ky.; J. Poley, of Clarinda, Iowa, and J. M. Hand, of Jamison, Ala., have organized a stock company to operate the plant of the Alabama Lumber Co., Brewton, Ala.

A saw mill is being erected near Wilsonville, Ala., by John W. Bolin.

The Capitol City Street Railway Co., Montgomery, Ala., previously reported, have contracted to have all their lines run by electric motors. A 120 horse-power engine will be erected to run the dynamos.

ARKANSAS.

The Caddy Mining Co., Little Rock, Ark., reported last week, has been organized with Mr. Nicholson as president. The capital stock is \$5,000,000. The company have 36 located claims and mines which they will open and develop soon.

T. W. Gibbs will erect a \$7,500 building at Hot Springs, Ark., for E. Burgauer & Co.

FLORIDA.

The saw mill of H. M. Lee, near Lake City, Fla., reported in this issue as burned, will be rebuilt.

The machine and blacksmith shop of Charles Ruter, Millview, Fla., reported in this issue as burned, loss \$8,000, will be rebuilt at once, the new machinery having been already ordered.

John Clark will erect at Jacksonville, Fla., a three-story brick and iron building, 52x100 feet.

It is reported that J. L. Amazeen contemplates erecting an artificial stone factory at Palatka, Fla.

The Home Fertilizer Co., Sanford, Fla., will move their works to another site and enlarge them.

There are prospects of a paper factory being started at Sanford, Fla., by Williams Bros., of Brooklyn, N. Y.

A cigar factory will probably be moved from Key West to Sanford, Fla.

Emmett Herndon, Sanford, Fla., will add some new machinery to his wood-working factory. Is now adding grist mill machinery.

James P. Logan, James Swann, Samuel M. Inman, W. J. Jarvis and others have incorporated in Florida the Haines City & Gulf Railroad Co. The road will be 100 miles long.

A railroad has been chartered in Florida to extend from Deadman's bay to Lake City.

A brick yard is being started at Lakeland, Fla., by a company from Georgia.

GEORGIA.

Robbins Bros. & Co., Atlanta, Ga., have leased a stone quarry of Jesse Felker, Ringgold, Ga., and will develop it.

Landreth, Ladle & Co. have started a spoke and handle factory at Bartow, Ga.

John Fred, Macon, Ga., has received the contract to build a \$5,000 jail at Eatonton.

Brewer & Thrash will erect a shingle mill near Seney, Ga.

Howard & Poole and Mr. Green are each developing iron ore mines near Cedartown, Ga.

James McCosh, La Grange, Ga., is in the North purchasing machinery for a cotton mill which he will erect.

The Screven County Lumber Co., capital stock \$10,000, has been incorporated at Sylvania, Ga., by D. C. Bacon and H. P. Smart, of Savannah, and George W. Walters, George M. Zeagler and J. Kline. The company will erect saw and planing mills to manufacture building materials.

Thomas Lawhon has started a brick yard at Cartersville, Ga. The machinery has been erected.

E. H. Woodward will resume the development of his manganese iron ore mine at Cartersville, Ga., and will ship 15 tons daily.

It is stated that a chair factory has been erected at Carriker's Store, Ga., by T. J. Joiner & W. J. Thornton.

Bids will be received until June 15 for the erection of two school buildings at Athens, Ga.

Several gold mines are being opened and developed at Warrenton, Ga.

F. F. Hardwick and others will build a two-story opera house 50x100 feet at Dalton, Ga.

KENTUCKY.

The contract to build the 140-mile extension of the Chesapeake & Ohio Railroad, from Ashland to Covington, Ky., has been let to the Mason & Foard Co. and D. Shanahan & Sons, of Louisville, Ky. The contract for the masonry for a bridge across the Ohio river at Covington has been let to the same parties.

The Ohio Falls Manufacturing Co., capital stock \$25,000, has been incorporated at Louisville, Ky.

Moneyhon, Kerans & Co. have started a tobacco hoghead factory at Augusta, Ky.

The United States Car & Axle Lubricating Co., capital stock \$500,000, has been incorporated at Covington, Ky., by Charles P. Holmes, A. E. Heighway, Jr., Halden Davis and Charles T. Mills, to manufacture and sell railroad supplies and appliances.

Bills have been introduced in the Kentucky legislature to incorporate the Carrolton & Louisville Railroad Co. and the Clarksville & Ohio River Railroad Co.

It is reported that works for making fire-bricks will be started at Ashland, Ky.

A number of capitalists of Nashville, Tenn., and J. F. O'Shaughnessy, of New York, have purchased the charter of the Mammoth Cave Railway Co., and will build a standard gauge road from Glasgow Junction to Mammoth Cave, Ky.

The Conway Lumber Co. has been organized at Conway, Ky., by C. D. Chenault, John D. Harris, Marshall McCormick and Conn Bros. The company has erected a large mill, the main building being 30x128 feet.

LOUISIANA.

The building of an oil mill is being considered by the citizens of Troyville, La.

The Anheuser-Busch Brewing Co. will erect a \$17,000 building on Gravier street, New Orleans, La.

A bill has been introduced in the Louisiana legislature to incorporate the Alexandria, Sabine & Texas Railroad Co.

The Shell Beach Railroad, in Louisiana, will be extended to Pointe-a-la-Hache.

The cotton press of A. W. Cooper, New Orleans, La., reported last week as burned, will be rebuilt. The contract has been awarded to Leeds & Co.

Bernard Klotz & Co., New Orleans, La., have added considerable new machinery to their cracker factory, to manufacture candies extensively.

MARYLAND.

The Mount Ararat Lodge, Belair, Md., will erect an \$8,000 building.

N. Oscar Stokes will put new and improved machinery in his flour mill near Jarrettsville, Md.

The contract to build a bridge across the Severn River at Annapolis, Md., has been received by William R. Weaver, of Baltimore, at \$23,700.

The C. A. Gambrill Manufacturing Co., Baltimore, are enlarging one of their flour mills and putting in new machinery.

Edward Jenkins & Son, Baltimore, will erect a large four-story building on Baltimore street near St. Paul.

John E. Du Bois will, it is said, add a sash factory to his planing mill at Havre de Grace, Md.

MISSISSIPPI.

The Greenville Compress Co., Greenville, Miss., previously reported, have bought their new compress.

NORTH CAROLINA.

The Massachusetts & Southern Construction Co. has erected a lumber mill near Webb's Creek, in N. C.

A brick yard will be started at Oxford, N. C., by J. S. Hamilton.

W. B. Wilson and O. Hicks will start a brick yard at Rutherfordton, N. C.

\$23,000 has been subscribed towards the organization of a stock company at Reidsville, N. C., to build a cotton factory.

John W. Grisham & Co. will add a grist mill to their saw mill at Beaulaville, N. C.

It is stated that a stove factory will be established at Wilmington, N. C.

The Charlotte Cotton Mills, Charlotte, N. C., have shut down to make repairs and add some new machinery.

H. W. Clark, of Boston, Mass., has bought the Henderson Mine, in Mecklenburg county, N. C. A new shaft is being sunk, and a stamp mill may probably be erected.

B. H. Thompson, Aurora, N. C., contemplates erecting a saw mill.

SOUTH CAROLINA.

H. H. Owen, Liberty, S. C., will erect machinery to saw marble by steam power.

Josiah Asburg, Charlotte, N. C., has received the contract to erect a \$6,000 college building at Winnsboro, S. C.

The Blackville & Alston Railroad, previously reported as incorporated in South Carolina, has been organized at Blackville with D. H. Salley as president, and E. S. Hammond, J. J. Whaley, Nathan Porter, M. Brown, Alfred Aldrich and J. M. Price, directors.

The Huguenot Mills, Greenville, S. C., which have been idle more than a year, have been purchased by E. C. Graham, of Asheville, N. C., and will be put in operation. Spinning machinery may be added.

Sumter, S. C., will decide by popular vote June 8 whether or not to spend \$20,000 in enlarging their water works.

TENNESSEE.

The Dickson Oil Co., Dickson, Tenn., have erected their machinery for boring for oil.

Brown, Godfrey & Co. have opened several new marble quarries at Louisville, Tenn.

A grist mill has been erected at Heiskell's Station, Tenn., by W. D. Bittle, Son & Co.

C. A. Moross & Co. will erect extensive lime works at Chattanooga, Tenn.

W. W. James will erect machinery at his quarry at Bristol, Tenn., for sawing and dressing the slate.

Nashville, Tenn., contemplates building a new reservoir at a cost of about \$200,000.

James T. Waters, Walter M. Flemming, Halstead C. Burnet, George F. Gardener and Asanel Severance have chartered at Nashville, Tenn., the Universal Dynamophone Co., to manufacture electrical appliances and devices.

D. F. Valentine contemplates starting a broom factory at McMinnville, Tenn.

The Cumberland Lumber & Box Co., Nashville, Tenn., have completed the erection of their planing mill building, and are now putting in the machinery.

L. B. Kennedy and others are organizing a stock company at Nashville, Tenn., to manufacture brick by a patent process.

The East Tennessee, Virginia & Georgia Railroad Co. have purchased 35 acres of land at Chattanooga, Tenn., which, it is said will be used as a location for large shops or as a switching yard.

TEXAS.

It is reported that Mr. Lyle has purchased machinery and will build an ice factory at Cleburne, Texas.

Alexander Sanger will build a handsome residence at Dallas, Texas, to cost over \$100,000.

The Lone Star Salt Co., Colorado, Texas, are rebuilding their works, previously reported as burned. The capacity of the works will be nearly doubled.

It is stated that the machinery has been purchased to erect a 2-ton ice factory at Colorado, Texas.

The Fourth Street Methodist Church, Fort Worth, Texas, will erect a new edifice at a cost of about \$20,000.

The contract to build the new courthouse at Bellville, Texas, previously reported, has been awarded to Henry Kane, of Gonzales, at \$37,500.

It is stated that a flour mill will be erected at Wichita Falls, Texas, this summer. Major Foreman can probably give particulars.

Love, Hood & McLeod, Brownwood, Texas, have received the contract to build a court-house at Hamilton, Texas, to cost \$29,700.

VIRGINIA.

The Crozier Steel & Iron Co., Roanoke, Va., have leased the Rich Hill property, near Wytheville, Va., of D. S. Forney, and are at work opening the mines. Over 100 tons of ore will be mined daily.

A grain elevator will be erected at Raphine, Va., by J. E. A. Gibbs.

Some new machinery has been put in Joseph F. Dodd's flour mill at Waterford, Va.

A mattress factory is being erected at Roanoke, Va., by E. H. Stewart.

LOCKWOOD, GREENE & CO.
MILL ENGINEERS
Office, 65 Westminster St., Providence, R. I.,
Carefully prepared plans, specifications and estimates furnished for the construction, equipment and organization of new mills and the revision and improvement of old.

Stevenson, Mullin & Co. have leased a tract of coal land near Pocohontas, Va., and are opening a mine. They are preparing to build 50 coke ovens.

Morton Bros., Waverly Station, Va., are seeking a good location in North Carolina for a shuttle and bobbin factory.

Miller & Hawkins are erecting at Lynchburg, Va., a brick tobacco factory, 4½ stories, 51x130 feet.

WEST VIRGINIA.

The old Irondale Furnace of T. Nemegyei, Raccoon, W. Va., is being replaced by a new furnace to have a weekly capacity of 225 tons.

A large saw mill is to be erected at St. Albans, W. Va., by Humbird, Sleiger & Co.

The Jefferson Woolen Mill, Wheatland, W. Va., has been refitted with new machinery and will be put in operation in a few days.

It is reported that parties from Pittsburgh, Pa., will soon erect 100 coke ovens near the mouth of the Cheat river, in West Virginia.

BURNED.

The saw mill of Davis & Cooper, Thonotosassa, Fla. Loss \$4,000.

The mill of Alfred Parkins, near Winchester, Va. Loss \$5,000.

Reuben Donalson's steam saw mill and gin at Red Bluff, Ga. Loss about \$5,000.

The furniture factory of the Cherokee Manufacturing Co., Dalton, Ga. The loss is reported as \$20,000.

The saw mill of H. M. Lee, near Lake City, Fla. Will be rebuilt.

The tobacco factory of E. W. Murphy & Son, near Owensboro, Tenn.

The machine and blacksmith shop of Charles Ruter, Millview, Fla.; loss \$8,000. Will be rebuilt.

The saw mill of Walker & Hayes, Columbia, Ala. Loss \$15,000.

The gin and grist mill of A. Ledoux, in St. Landry Parish, La. Loss \$1,200.

It is reported that the mills of William Shirley and William Jones, 15 miles from Fayette C. H., Ala., have been destroyed by a flood.

The mill of McAnally, Ramer & Co., Brownwood, Texas.

The sash and door factory of Tanner & Lemaster, Cowpens, S. C.

The saw and grist mill of L. C. Beacham, ten miles from Dublin, Ga. Loss \$5,000.

Mr. Sigman's saw mill at Haines City, Fla. Is being rebuilt.

The cotton gin and grist mill of C. C. Howell, near Van Buren, Ark. Loss \$3,000.

The Purves Sash & Blind Factory at New Orleans, La.

Rice Machinery Wanted.

NEW ORLEANS, LA., May 14, 1886.

Editor Manufacturers' Record:

I intend to build a rice mill. I will appreciate all information or correspondence from manufacturers of rice mill machinery, as such correspondence might lead to a trade.

A. SOCOLA.

Stone Quarry.

RINGGOLD, GA., May 17, 1886.

Editor Manufacturers' Record:

I have leased a rock quarry situated in this (Catoosa) county to a company in Atlanta by the name of Robbins Bros. & Gouse. This quarry has been worked at intervals for 40 years; the State first worked it, and then private parties. The stone is valuable for its bright brown color, easily worked, and very accessible to railroad facilities. I have manganese near this rock quarry, and not leased; and also red ore in abundance, and all in the same mountain and near the railroad.

JESSE FELKER.

Information Wanted.

WARRENTON, VA., May 14, 1886.

Editor Manufacturers' Record:

If you can, please let me know where I can get elm flour barrel staves and soft elm heading. You will confer a favor on me by answering the above.

H. M. WHITE.

Water Works.

ABILENE, TEXAS, May 10, 1886.

Editor Manufacturers' Record:

We have been incorporated and have built works. Our authorized capital stock is \$60,000, \$34,000 of which is paid up.

THE ABILENE WATER WORKS CO.

KAUFMAN, TEXAS, May 15, 1886.

Editor Manufacturers' Record:

Our County Alliance at its late session appointed committees to devise ways and means for building four mills, one each at Terrill, Kaufman, Forney and Egypt. These committees are to report at our session in June. I think it quite probable that the contemplated mills will be built. The chairmen of these committees are W. W. Campbell, Terrill; M. A. Averitt, Kaufman; B. F. Coates, Forney; J. H. Fox, Egypt.

J. W. EMERY.

NEWSTEAD, KY., May 13, 1886.

Editor Manufacturers' Record:

I am now running a saw mill on a small scale, cutting not more than 5,000 feet per day.

A. M. HENRY.

WHEATLAND, W. VA., May 17, 1886.

Editor Manufacturers' Record:

We will start up in a few days with an entire set of new machinery, and hope to do well.

JEFFERSON WOOLEN MILLS.

J. J. JOBE.

Capacity Doubled.

ST. AUGUSTINE, FLA., May 17, 1886.

Editor Manufacturers' Record:

Owing to a contract on the new Ponce de Leon Hotel building in this city, we have more than doubled our capacity. Have bought several new machines and are now setting up a fine moulder of Goodell & Waters' make. Building is brisk all over the city, with good prospects for the next six months.

COOK & LIBBY.

Tobacco Factory.

LYNCHBURG, VA., May 17, 1886.

Editor Manufacturers' Record:

We are building a stone and brick factory, 51x130 feet, four and one-half stories high. The yearly capacity will be, when running full time, about 6,000 hogheads leaf tobacco steam dried. Our annual output at present is about 2,000,000 lbs. leaf for export and home trade.

MILLER & HAWKINS.

\$200,000 for Improvements.

ATLANTA, GA., May 15, 1886.

Editor Manufacturers' Record:

The Georgia Marble Co. have voted \$200,000 additional, to be expended in further improvements, opening additional quarries, etc.

O. F. BAUE.

NEW ORLEANS, LA., May 13, 1886.

Editor Manufacturers' Record:

The heirs of the late A. W. Cooper intend rebuilding the Cooper Press immediately. The contract has been given to Leeds & Co., of our city.

MRS. COOPER.

Furniture Manufacturing Co.

CARROLLTON, KY., May 15, 1886.

Editor Manufacturers' Record:

The Carrollton Furniture Manufacturing Co. has purchased the factory and business of the Carrollton Furniture Co., and will add capital, energy, etc. Will probably erect a lumber dry kiln this summer and a large warehouse this fall. There are only seven stockholders, five of whom are directors, who will manage the business. H. M. Winslow is president, W. B. Winslow secretary and treasurer, and H. Schuman, Jr., superintendent.

H. N. WINSLOW.

MINING NOTES.

By T. K. BRUNER, Salisbury, N. C.

MINERAL WEALTH OF MONTGOMERY COUNTY.

Montgomery county contains the oldest and most noted placer deposits to be found in the State of North Carolina. Some of these deposits have been known and worked at times for more than three quarters of a century. El Dorado township, situated between the Yadkin and Uwharrie rivers, is probably the most famous district in the county. The "Beaverdam" is the oldest placer mine, and was no doubt the source of the "fever," which led to the exploitation and further discovery of gold in that region. It has been by far the most active mine in the county, and the late Thos. J. Forney took from the bed of the Beaverdam creek 65,000 pennyweights of nugget and coarse gold after it had been abandoned by old miners. The property is now owned by a Northern company—Mrs. Garfield is one of the owners—but it is idle. Col. Jno. F. Cotton, of Flagtown, owns the lower portion of Beaverdam, which is a large lake, from 3 to 15 feet deep. The lake is the great receptacle of the washings from above, and is supposed to be very valuable.

But proceeding with the list of mineral properties in the above named township, only brief mention can be made of each:

E. H. Davis owns mining properties on the tributaries of Beaverdam, also the Morris Mountain Mine, which is considered valuable.

Davis Russell Mine, owned by Thayer, Hearne & Co.

Crump Mine, owned by the Troy & North Carolina Mining Co.

Eli Coggins Mine, George M. Henderson, owner.

S. F. Russell, senior, heirs, &c., own valuable mining lands and the Beaverdam.

Luke Blackner, Esq. (Salisbury, N. C.) owns the Parsons Harris and David Hearne Mines, and several other properties in the township known to be gold-bearing.

Waistner Mine, owned by David Spruce and Jas. W. Reeves own mineral lands adjoining the above.

Grandmaur Mine, controlled by S. J. Pemberton, Esq.

Bettie Hearne Mine—Geo. B. Coggins.

Coggins Mine (now Apalachian), owned and worked by English capitalists.

Seth Coggins Mine—Jno. F. Cotton.

Big Russell Mine, owned and operated by English capitalists.

Palmer Mine, contiguous above; Zeb Russell.

J. H. Davis auriferous lands in El Dorado township.

The following are the leading properties in Ophir township:

Davis Mine—Daniel A. Coggins.

Bright Mine—Northern Company.

Ophir Mine—adjoining above and owned by same parties.

Steele Mine, active now; Northern Company.

Lyon & Co. own property adjoining of the same character.

Bunnell Mountain Mine—R. M. Eames.

In Uwharrie township the following are the most prominent mines:

Hog Pen Branch—C. C. Wade.

Spencer's Creek and Mosely Branch Mines are controlled by Elias Hurley.

Island Creek Mine—F. J. Kron.

Reeves Mine—Dr. J. M. Worth.

Cedar Creek Mines—P. C. Saunders.

Sam Christian Mine—Northern company; mine active.

The mines in Troy township are:

Cotton Stone Mountain—gold, silver, copper and pyrophyllite. John F. Cotton.

Smitherman Estate owns valuable property adjoining the above.

Carter, Moore and other fine mines, owned or controlled by C. C. Wade.

There are some good properties in Pe De township, but no list has been made. The above does not comprise all of the known localities in Montgomery, but merely the leading ones. New discoveries are being added each week to this list.

RANDOLPH COUNTY.

It is reported that Mr. Bartrum, of England, has purchased the Porter Gold Mine, formerly the Johnson, and that he will put up a ten-stamp mill.

It is expected that the Poplar Branch Mine will be made active early in June.

The Gray Mine has been sold to Messrs. Bugman and Renfrey, the former of Baltimore and the latter from High Point, N. C.

The Uwharrie Gold Mine, owned and operated by the "Old North State Co.," is producing large quantities of fine ore.

Protection for Sugar.

Mr. Patrick Walsh, in the New Orleans Picayune, in setting forth the need of protection for the sugar trade, says:

The object of a high tariff is to promote and protect American industries, not to raise prices, as Mr. Forman contends. The price of a protected article may at first be incidentally raised, but the laws of trade and natural competition tend to lower it, and it is a fact beyond question that under the present high tariff goods of every description are cheaper than ever before in the history of our country. If an article is protected by a tariff of 46 per cent., it is sheer nonsense to say that the consumer pays that 46 per cent. to the producer. Does the New England mill owner who sells a print for 4 cents, protected by a tariff of 4½ cents per yard, or 112½ per cent., make the 4½ cents? Does the consumer lose it? Did the Pennsylvania iron man who sold cut nails within the past twelve months, protected by a tariff of 1¼ cents per pound, or 50 per cent., for 2½ cents make the 50 per cent.

Mr. Forman says the free traders always favored a tariff on sugar, because that article yielded a larger revenue than any other. Did not the free traders reduce the tariff on sugar in 1883? Is not Mr. Morrison, the leader of the free traders, advocating a still further reduction?

Mr. Forman gives figures showing that sugar pays a revenue of \$52,000,000, while iron pays less than \$12,000,000. These figures are very significant; they show that iron, being amply protected, expanded year by year until it now reaches the enormous value of \$600,000,000 annually (by iron, I mean the total iron and steel industry); they show that the sugar industry of Louisiana, being inadequately protected, has merely kept alive to save funeral expenses—the funeral expenses being \$50,000,000 in buildings and machinery, which could not be used for other purposes.

Our iron industry had only to compete with England, a nation that pays the highest wages outside of our own country, while the sugar planters of Louisiana have had to contend with six European nations, who pay a large bounty on exported sugar, as well as the barbarian and semi-slave labor of every quarter of the globe.

Louisiana produced 125,000 tons of sugar last season, on 100,000 acres of ground; there are millions of acres of sugar lands in this State, Texas and Florida. Germany has over 1,000,000 acres in sugar beets. 1,000,000 acres of our lands under cane would more than produce the 1,116,847 tons of sugar we consumed last year, and give employment to nearly half a million hands.

Sugar is an article of food, the consumption of which has doubled in the United States during the past fifteen years; at the same ratio of increase we would require 2,250,000 of tons fifteen years hence, the cost of which, at less than the average price of sugar for the past twenty-four years, would be over \$300,000,000, or more than the export value of our cotton crop.

Would it not be better for our government to foster such an industry than destroy it? Would it not be better to keep our money at home, and give employment to our own people than distribute it among the nations of Continental Europe and the islands of the Pacific and Indian oceans.

The Success of Pottery Manufacture at Aiken, S. C.

Editor Manufacturers' Record:

Pleasant and profitable to your many readers have been the numerous articles appearing from time to time in your "none-such" RECORD of the South's great strides in industrial improvement; and scarcely an industry has escaped the keen eyes and facile pens of your watchful correspondents. Perhaps, however, I may prove fortunate in giving interest, to this short letter, by

from consumers keep ahead of the supply. All of the improvements are the best of their kind, including one improved up-draught oven, such as is found in use in Trenton, N. J., for the management were not content to establish a "jug factory" merely, but having the finest material nature could supply, they wisely availed themselves of all the information skill and experience could yield them, and only after inspection and comparison of the best potteries in this country did the management build, and with the skilled labor referred to, the works of the South

bia & Augusta Railroad, with its private siding, and station, around which a small town is steadily growing, thus assuring an enhancement of values in the company's lands commensurate with the growth and output of the pottery.

At no distant day the South Carolina Pottery, now the only one of its kind and extent in the State or adjoining States, if not in the South, must be the center of a vast industry; and as all the conditions for making all the grades of china exist in unmeasured quantities side by side, with plenty of willing labor suitable for all save the higher grade of work, and capable of being taught that, and with a market anxious to be supplied from a home and cheaper source, why may this modest beginning not lead to the building up of a "Birmingham" for pottery that will vie with its Alabama sister of iron fame, and even contend in quantity and quality of wares with Baltimore or Trenton, N. J.? Already the South Carolina Pottery is turning out Rockingham, yellow and queensware, terra cotta, English stone and majolica; also fire bricks.

One such successful pottery as the South Carolina will lead to many others, to compete in an ever-growing market of demand, and thus another great industry arise to bless the people, who, from

till "Granitville" catch up the ever-pleasing refrain, weaving to measure the spinnings of its jennies, and giving echo to the sound of productive metre from the timbre of resonant pottery wares above in "C" (lays).

JAMES G. HOLMES.

A SOUTHERN Congressman, who is quoted as stating that the South is rapidly adopting protection sentiments, says:

"When slavery was abolished the economic interests of the South took a change. The South now has free labor, therefore the interests of the people in American industry are correspondingly changed. Missouri, Tennessee, Kentucky, Alabama, Louisiana, Georgia, South Carolina, West Virginia, Virginia and Maryland; in fact, every Southern State is more or less interested in protection, and will become more so every year. I think it is time for the Southern people and their representatives to look into this matter. It is not a question of politics, but of common sense."

If the whole South would see the tariff question in the light of common sense and ignore the traditions of the past on this point, it would greatly benefit that section. Protection is essential to Southern prosperity; without it the manufacturing interests of that section cannot be developed, and without manufactures to furnish a home market for their products, Southern farmers will never reach that high state of prosperity attained by the farmers in such States as Pennsylvania, where the abundance of manufactures results in a home market for agricultural products.

Grinding Mill and Cotton-Seed Huller.

The cuts on this page show the Scientific Grinding Mill, with cotton-seed huller attachment, manufactured by the Foss Manufacturing Co., Springfield, Ohio.

The mill is intended to grind ear corn, either with or without husks, shelled corn, and all small grains for feed. The frame work and casing for the burr are cast in one piece, having the bearings for the shaft in one casting, and not three or four pieces bolted together, thus preventing the bearings from getting out of line. This feature will be seen on referring to the cuts.

The mill is simple in its construction. It can be taken apart and put together quickly

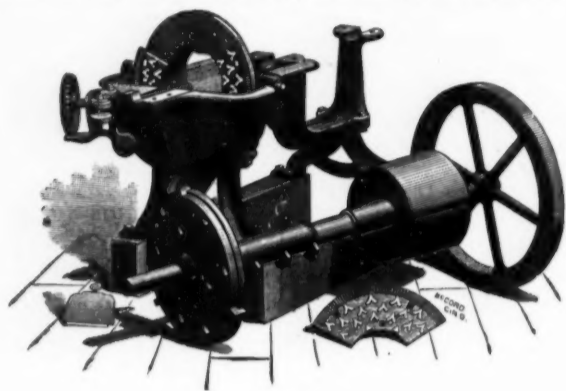


FIG. 1.

describing a branch of manufacturing not yet touched upon, I believe, and giving promise of great development—to wit, the pottery interest of the South, as set forth by the South Carolina Pottery, and perhaps other potteries unknown to the writer. Aiken, S. C., is probably one of the oldest and best known health resorts in the South, but is known principally because of its pure dry climate, so conducive to the restoration of impaired throats and lungs, and for the beauty of its location, the comfort of its hotels and home-like boarding houses. Few of the many who visit Aiken in quest of health have the energy to discover that the very hills upon which it is built have underlying, yea! outcropping, strata of valuable porcelain clays, that should be put to a better use than as adulterants by Northern manufacturers of cakes, candies, etc., and as sizing for sheeting, wall paper and like goods. But nature so prolific and provident in blending cause and effect has in these very hills surrounding Aiken wrought out a blessing from a seeming ill. Some two years since Mr. James L. Jervey, of Chas. H. Drayton & Co., phosphate miners, Charleston, S. C., was forced to seek relief from a throat trouble that caused him to leave the moist coast climate of a seaport like Charleston; and his steps naturally led directly to Aiken, a few hours run from Charleston, on the line of the South Carolina Railway, and only sixteen miles from Augusta, Ga. Once in Aiken, and his health improving, this active gentleman was not content to merely breathe the resinous breath of the balmy pines, and bask in the luxurious glow of a Southern sun. He must find employment for his restless energies, though Southern born and bred—(strange statement to the Northern mind), and happily the hills that gave him life with health, gave him opportunity for work both agreeable and remunerative. His friend, and some time business partner, Capt. J. J. Cahill, had possession of a valuable property of eleven hundred acres, through which runs Horse Creek, upon whose banks, some three miles lower down stream, is situated the well-known Vaucluse Cotton Factory. From these causes, as cited above, sprung, or grew by steady progressive and intelligent effort, the South Carolina Pottery, and to-day skilled Scotch potters, brought over from Scotland for this company, and one skilled workman from Trenton, N. J., with native helps, are turning out wares that of their kind are unsurpassed if equalled in this country. The clays are so plentiful and varied, and yield so readily to the potter, and burn so smoothly, making bright attractive wares of perfect finish, that the orders

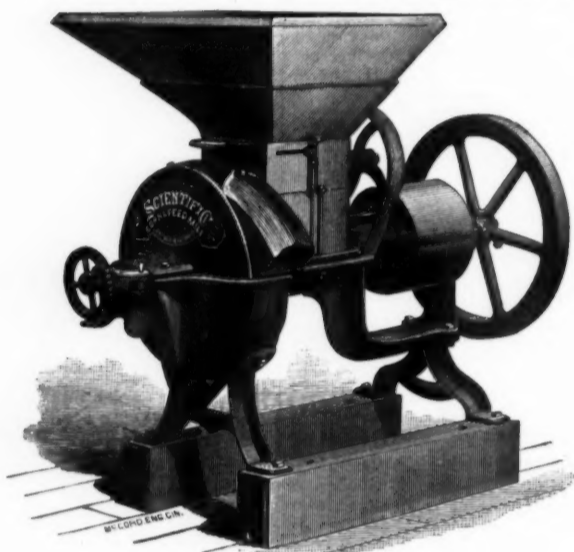


FIG. 2.

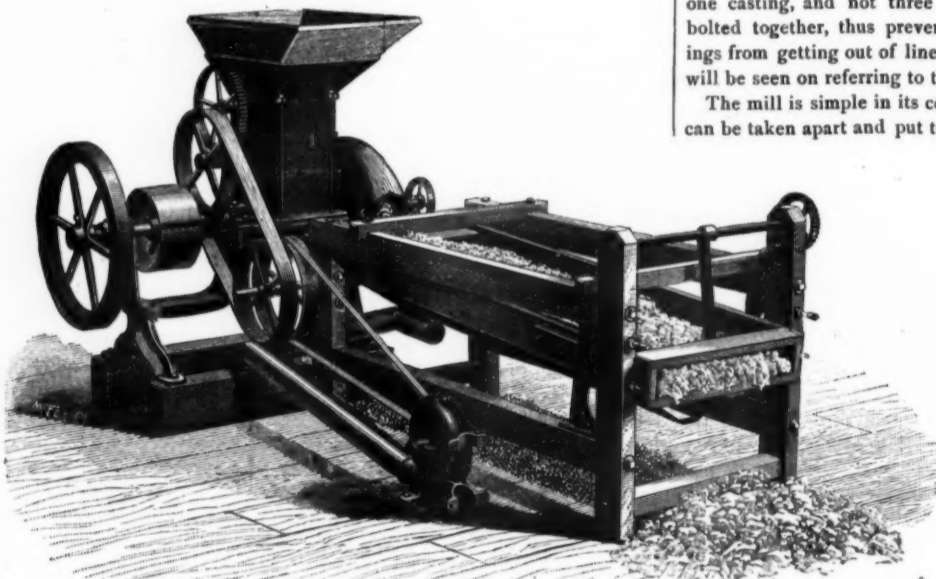


FIG. 3.

Carolina Pottery are complete of their kind, and challenge inspection of the plant or its output.

Horse creek, an unfailing stream, furnishes the motive power and all the water needed, and its capacity is such that at small cost the supply can be doubled. The tract is heavily wooded, and about one-half with yellow pine, the best fuel for the purposes of the pottery. Then the pottery is so advantageously located, the works being only 50 yards from the trunk line of the Charlotte, Colum-

bia & Augusta Railroad, with its private siding, and station, around which a small town is steadily growing, thus assuring an enhancement of values in the company's lands commensurate with the growth and output of the pottery. At no distant day the South Carolina Pottery, now the only one of its kind and extent in the State or adjoining States, if not in the South, must be the center of a vast industry; and as all the conditions for making all the grades of china exist in unmeasured quantities side by side, with plenty of willing labor suitable for all save the higher grade of work, and capable of being taught that, and with a market anxious to be supplied from a home and cheaper source, why may this modest beginning not lead to the building up of a "Birmingham" for pottery that will vie with its Alabama sister of iron fame, and even contend in quantity and quality of wares with Baltimore or Trenton, N. J.? Already the South Carolina Pottery is turning out Rockingham, yellow and queensware, terra cotta, English stone and majolica; also fire bricks. One such successful pottery as the South Carolina will lead to many others, to compete in an ever-growing market of demand, and thus another great industry arise to bless the people, who, from

the ashes of the past, may turn out phoenix-like pottery of beauty to vie with the other well-known manufactured products of this favored section. The fleecy snow-white cotton from the soil of South Carolina is "warped with the woof" into handsome and useful plaids and sheetings by "the waters of the past," that, turning the wheels of the South Carolina Pottery they may not turn again, run on in rhythmic measure, flecked with the creamy clays from the pottery, to sing the song of the shuttle in "Vaucluse" factory,

without the aid of a mechanic. It runs lightly and requires but little power. Fig. 3 represents the mill set up for hulling cotton seed and separating the meat from the hulls. The sieve allows the meat to drop through, while the blower forces out the lint. The hulls are shaken off at the end.

Further information concerning this mill will be found in a hand-book issued by the Foss Manufacturing Co., which also contains an account of the results of experiments in feeding stock. It is an interesting and handsomely illustrated book, and will be sent free,

Keg and Cask Trussing Machine

This cut represents a patent trussing machine built by Geo. J. Fritz, proprietor of the Central Iron Works, 2022 to 2028 S Third street, St. Louis, Mo. Two sizes are built. The No. 1 will truss from a well bucket up to a half-barrel, inclusive; it will also truss one-eighth, one-fourth and one-half beer barrels. No. 2 will truss from half-barrel to a full barrel, inclusive. This machine is very simple in construction and durable, being made entirely of iron. Any ordinary man can operate the machine and, it is said, do the work of four good men trussing by hand. The machine can be changed from one size to another in less than ten minutes, and trusses kegs uniformly.

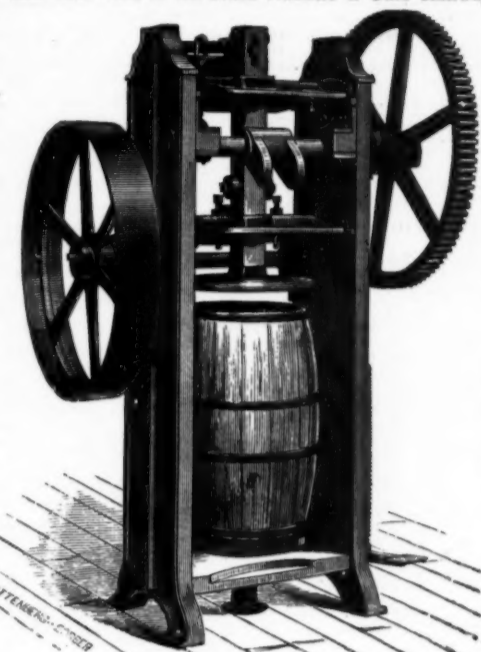
The lower table is adjustable and can be set to suit the various heights just by turning the lower table, which has a screw shank, and which enables the operator to adjust it to a sixteenth of an inch.

The machine will force the two head hoops in position at one revolution of the cam shaft.

The machine is also made (if so desired) to truss the quarter or bilged hoop at the same time the head hoops are trussed, but this improvement is only attached for those who want to have it, as the majority of coopers truss the head hoops only, especially the beer keg coopers.

The operator places the keg on the lower platin and puts his foot on the treadle, which starts the cam to revolve and stop itself after keg is trussed.

With the advantage of many years' practical experience in the making of coopers'



KEG AND CASK TRUSSING MACHINE.

Resources of Southwest Virginia.

Prof. C. R. Boyd, State Geologist of Virginia, in a recent speech on the resources of Southwest Virginia, said:

There is a general concurrence in the assertion that the region immediately on the line of the South Atlantic & Ohio Railway

and the contiguous territory constitute an extensive body of mineral, timber and agricultural lands, richer in natural resources than any other area of like extent in America.

A portion of this region has been inspected by Prof. R. H. Richardson and T. M. Down, of the Boston Institute of Technology, and others of like eminence and standing both in this country and in Europe,

can undersell English steel in British seaports. Natural gas has been observed exuding from the ground in various places, and the diamond drill will eventually reveal the reservoirs in which it is now stored.

The marble deposits of Scott county are about 30 miles out of the line from Bristol, in the belt of limestone of No. 3 formation—for the age and general characteristics of the standard Tennessee marble—in deposits varying between 50 and over 150 feet thick by a length of more than 2½ miles. This marble is of superior quality and beauty, and, when polished, handsomer than the Tennessee marble, and its texture is quite as uniform and reliable. To the south and southeast of Bristol, in Mt. Rodgers, are large areas of elevated lands covered with a dense growth of black spruce, along the lower margin of which is a belt of fine cherry. In the counties north of Bristol, poplar, walnut, ash, hickory, locust, white oak, chestnut oak, black and red oaks and chestnuts, constitute the great body of timber, while here and there are areas of white pine, yellow pine, buckeye, cherry, sycamore, willow, maple, dogwood, cedar, beech, birch, spruce, and other trees and shrubs common to the latitude.

A New Door Knob.

The knob here illustrated is manufactured by the Nimick & Brittan Manufacturing Co., Pittsburgh, Pa., and has just been invented by their superintendent, Mr. Philip Mathes. It is intended to do away with screws in the neck of the knob, which have always been a source of great annoyance in becoming loose and falling out.

This knob is adjustable to any thickness of door. One end is fastened permanently to the spindle, and the other end (as seen in the illustration) is screwed on the spindle and stopped by a small lock-nut which fits into the cavity of a thimble, and this thimble fits into the rose.



NEW PATENT DOOR KNOB.

machinery, Mr. Fritz has perfected a trussing machine that seems to meet the universal demand of coopers in want of a good trussing machine that will do perfect work. Further information may be obtained by addressing the manufacturer.

THE Camperdown Cotton Mill, of Greenville, S. C., which was sold last fall, and put in operation by a new company, with Mr. H. P. Hammett as president, has already declared a 4 per cent. dividend, free of taxes, for the first six months of operation. The Piedmont Mill, also under Mr. Hammett's management, has declared a semi-annual 4 per cent. dividend.

A DISPATCH from Spartanburg, S. C., says: "The meeting of the stockholders of the Clifton Cotton Manufacturing Company on last Tuesday was most satisfactory. All the reports indicated energy and progress and favorable prospects for the future. A dividend of 3 per cent. was declared for the past year. The Pacolet Manufacturing Co., of Spartanburg county, at their annual meeting also reported a favorable outlook, and declared a 3½ per cent. dividend.

who will doubtless agree that Southwest Virginia, Kentucky and East Tennessee, together with the neighboring part of North Carolina, comprise within this comparatively limited area useful ores, minerals, mineral water, coals, timber and productive soils, and a region which is at the same time thoroughly well watered by large and constant streams; and having such elevation above sea level as to render its health conditions as an entirely reliable factor in the problem of its steady and profitable development.

To all these valuable features it adds a beauty and attractiveness so rare as to invite thousands of tourists and pleasure seekers annually. In the Cleveland district of England, and possibly at Birmingham, Ala., iron ores and coal deposits may exist as conveniently situated with reference to each other as they are at Big Stone Gap, but it is doubtful if they even will bear the comparison when the ultimate cost of the production of metal from the ores is taken into consideration. The probability is that in the vicinity of Big Stone Gap, as well as in other parts of that region, steel will be made that

In putting the knob on a door the rose can be held firmly in place by the thimble until the screws are in; then the knob can be screwed on the spindle and adjusted according to the door's thickness.

The manufacturers claim that this knob is susceptible of more perfect adjustment than any other knob yet made.

is also used as a hog ringer, and is a good nipper and plier. It is claimed that it will cut large sizes of wire without danger of breaking and that it is capable of very rapid work. One of its best features is that only a slight movement is required to operate it, and it can be easily used with one hand while feeding with the other. For putting



CRONK'S PATENT WIRE CUTTER.

Three principal points in its favor are:

- 1st. No screws in the shank.
- 2d. Perfect adjustment to thickness of door.
- 3d. No trouble in putting it on the door.

Subscribe to the Manufacturers' Record.

up or repairing wire fences it will be found to "fill the bill." The value of this little implement is shown in the fact that the manufacturers are two months behind with their orders, so rapidly has it grown in favor. With the addition of new machinery, however, they will soon be in a position to fill all orders promptly.

Flour Milling—The Revolution Wrought by Machinery.

As good bread is essential to good health, and as good flour is necessary in making good bread, a few facts bearing upon the manufacture of flour in Baltimore may prove of interest. For over a hundred years, dating from 1774, the Patapsco brand of flour was admitted to be the best flour in this market. With the radical change in milling from buhrs to rollers a few years ago, which was first introduced in this country in the West, the new process or roller flour at once took the lead in the flour trade. Notwithstanding the inferiority of the Northwestern spring wheat to the hard winter wheat of Maryland and Virginia, a better flour could be made from the former by the new roller process than could be made from the latter by the old system of buhrs. On this account the spring patents commanded a higher price than winter wheat flour, the difference here in Baltimore at one time having been as much as \$2 a barrel.

The owners of the Patapsco mills of this city had never hesitated in spending money for the latest and best improvements in milling machinery, and it was due to this that they had so long maintained the high standing of their flour. In pursuance of this policy, they determined to completely revolutionize their mills, and to fit them up without regard to expense with the best roller machinery that could be had. This was done several years ago. The result is a matter of interest.

The spring wheat patents having won popular favor, as we have already stated, and the price for them having risen in some cases to as much as \$2 a barrel over winter wheat flour, the C. A. Gambrell Manufacturing Co., the owners of the Patapsco Mills, were placed at a disadvantage in regaining their position as the makers of the best flour that could be produced. About that time a leading dealer in Western flour, in seeking to prove the superiority of this flour over that made from winter wheat, stated in one of his advertisements that "as it is generally admitted that an article is worth what it will bring on the market, if spring wheat flour is not superior to winter wheat flour, why this difference in price?" That question is very appropriate just now, for owing to the superiority of winter over spring wheat—a superiority due to Nature's laws—the Patapsco people, since introducing the roller process machinery, have not only overcome the difference in price that existed a few years ago against their flour, but have now entirely wiped out this difference, and in some markets have actually advanced their leading brand, "Patapsco Superlative Patent," to a point where it commands a higher price than the best Minnesota patents. In Boston, the stronghold of Minnesota flour, the Patapsco Superlative commands 25 cents a barrel more than the best Minnesota; in Glasgow, Patapsco has secured the same position, and sells for 2/ per 280 lbs. above the highest price of Minnesota brands, and in London the same is true. Hence the question quoted above may appropriately be changed to read: "If winter wheat flour is not superior to spring wheat flour, why this difference in price?"

The superiority of the winter wheat flour is based upon the superiority of the hard winter wheat of Maryland and Virginia; and as the Patapsco Mills and the Minnesota Mills now use the same system of milling, the mill that has the best wheat will naturally produce the best flour, other things being equal.

It is conceded, after long experience, that Maryland and Virginia wheat is superior to spring wheat because it has a better combination of gluten and phosphates, the gluten being noted for its superior quality, and hence the bread made from this winter wheat contains more of the essential elements of nutrition than spring wheat bread. Bread being the staff of life, it is of course

of great importance that it should contain as much nutriment as possible. This is secured in the Patapsco flour.

The increasing demand for the Patapsco flour has necessitated increased production, and this is to be met by enlargement and improvements, upon which the millwrights are now at work, so that when completed, which will be about July 1st, the C. A. Gambrell Manufacturing Co. will have an annual capacity in their three mills of over 500,000 barrels of flour, requiring about 2,500,000 bushels of wheat. As a great manufacturing industry, this ranks as one of the most important enterprises in the country.

The Iron Heart.

Encased in every human frame is a wonderful machine, or force pump, which drives the blood through the arteries to all parts of the body, from whence it is returned to the machine through the veins. This machine is the heart, and, together with the arteries, veins and capillaries, constitutes the medium through which circulation is maintained in the system.

This wonderful human arrangement is of no more vital importance to man than are the railroads to the prosperity of the country—they are the circulating mediums of the nation's progress. Of them, owing to its geographical position, great length of lines, the large number of important cities it reaches, and the productive territory which it traverses, the Burlington Route, C. B. & Q. R. R., may, in comparison with the physiological structure mentioned, be called the "Iron Heart." Like its prototype in the flesh, it receives and emits a ceaseless flow of material for the maintenance of vitality. To and from Chicago, Peoria or St. Louis on the east, and Council Bluffs, Omaha, St. Joseph, Atchison, Kansas City and Denver on the west, it circulates all classes of travel between the prominent cities of the East and intermediate points, on the one hand, and the City of Mexico, Portland, San Francisco and all Pacific coast points on the other. From many of its numerous terminals it is also a strong factor in the maintenance of travel between prominent points North and South,—thus literally maintaining a circulation of commerce in all directions.


Unlike many human hearts, the condition of this one of iron is always strong and healthy, as the Burlington route maintains elegant equipment, perfect road-beds, steel tracks and, at important points, interlocking switches, besides adopting every modern device that will add to the comfort or safety of its patrons. For tickets, rates, or general information regarding the Burlington route, call on any railroad ticket agent in the United States or Canada, or address Percival Lowell, general passenger agent, C. B. & Q. R. R., Chicago, Ill.

CORRESPONDENCE relating to the manufacturing, mining, lumbering and all other material interests of the Southern States is solicited. Reaching so many capitalists in all parts of the United States seeking profitable investment in the South, the MANUFACTURERS' RECORD offers an excellent chance for the people in that section to place the advantages of each locality before those likely to be interested. We will take great pleasure at all times in telling what has already been accomplished in the South, and showing up the opportunities of doing still more.

Carriage and Wagon Material.

AXLES.	
Half Patent, solid collar.....	dis 60 5
Common.....	rate 4
Concord.....	8 5/8
BODY LOOP ENDS.	
Plain, set.....	100
Bolts, Eagle.....	70
CLIPS.	
Superior Axle.....	dis 60 5
Norway.....	40 5
Saddle.....	dox set 31 50
FINISHED CLIP KING BOLTS.	
No. 1 & 2.....	3
Flanged, 7/8 doz.....	\$3 00 3 50
DASHES.	
Leather.....	dis 10 5
ENAMELED CLOTHS.	
Muslin, 7/8 yard, 5-4.....	18
Drill, " 50 in.....	24
Duck, " 50 in.....	29
Tan Back, " 5-4.....	32
FELLOE PLATES.	
Per D.....	8
FIFTH WHEELS.	
Derby, 3/4, 7/8 doz.....	\$7 75
Drill, " 50 in.....	8 75
Cincinnati, 3/4, 7/8 doz.....	6 00
" 3/4, " 7/8 doz.....	7 00
RUBBER DUCK AND DRILL—35% off list.	
SPRINGS.	
Seat, 1 1/2 x 2 1/2, 7/8 pair.....	90
Buggy, 1 1/2 in. and larger.....	8
1 1/2 to 1 3/4 in.....	9
Oil-tempered springs ac. advance from above.	
MALLEABLE CASTINGS.	
Rate.....	8
Core.....	12
STEP PADS.	
Per doz. pair.....	\$2 25 @ 7 50
Spokes, No. 1, 1 to 1 1/4.....	\$2 25 set.
" " 1 to 1 1/4.....	3 50
" " 1 to 1 1/4.....	3 50
Wheels, Sarven Patent.....	\$6 50 to 14 00
SHAFT AND POLE COUPLINGS.....50%	
H. E. LEATHER.	
No. 1 Top, 7/8 ft.....	28
" " 7/8 ft.....	23
" " 1 Dash, ".....	12
" " 1 Dash, ".....	10 @ 10 1/2
Fancy Morocco, 7/8 ft.....	26
Bow, 7/8 ft.....	20 @ 23
Collar, ".....	24
Harness, 7/8 ft.....	40

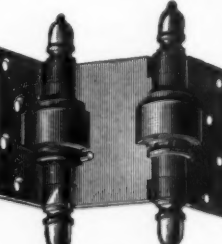
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BY FAR THE BEST!
Blow accurate, powerful and elastic.
Will increase the profits of any shop.
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UNION SPRING HINGES
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Cannot be put on wrong. They work on any hinge, right or left. All sizes. Hinge or door they have no equal. Send for Price List. W. W. ROBINSON, Sole Agent, 10 Chambers St., New York.



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The BEST and CONSEQUENTLY the CHEAPEST OFFICE DESK IN THE WORLD.

Derby & Kilmer Desk Co.,
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OFFICE AND WAREHOUSES:

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Illustrated Catalogue on Application

FOR SALE.

ONE SECOND-HAND ENGINE, 60 HORSE with tubular boiler. All in first-class order. For particulars address

GEO. O. BAKER & Co.,
Selma, Ala.

FOR SALE.

One 50-ton Zero Ice Machine at half-price. Correspondence Solicited.

R. P. GERLACH, Box 110, Cleveland, Ohio.

FOR SALE.

One-fourth or entire interest in the South Carolina Pottery: works on the line of the Charlotte, Columbia & Augusta R. R., near Aiken, S. C., (the famous health resort for throat and lung troubles,) and within 50 yards of the railroad station, with siding, and a town growing up, thus enhancing the value of the pottery lands. Eleven hundred acres in the tract, one-half heavily timbered with yellow pine. Ample supply of water, that can be doubled, for all purposes from an unfailing stream that lower down turns the wheels of a large cotton factory. Great variety and endless supply of best Kaolin and other pottery and fire-brick clays. Plant complete, including improved up-draught kiln similar to those used in Trenton, N. J. Skilled laborers Scotchmen, other hands natives, and wages moderate. More capital needed to increase output to meet orders, and thus further enhance profits now remunerative. Location healthy all the year, and no better opening in the "New South" for a practical potter or good business man with capital. Works now turning out Rockingham, Yellow and Queensware, Terra Cotta, English Stone and Majolica; also Fire Bricks. No similar pottery in State or adjoining States, and demand for wares heavy and increasing. For particulars address **James G. Holmes, 60 Buchanan's Wharf, Baltimore, Md.**

FOR SALE.

Complete system Cotton Mill Machinery of 5,000 spindles almost as good as new; has been run only about three years. Prices and terms satisfactory; part payable in bonds of a good company. The advertiser can secure contracts for its entire production at remunerative prices for one year ahead.

Address **O. M. HARPER,**
Care J. H. Lane & Co.,
No. 110 Worth St., New York.

Manganese for Sale.

The owner of a Valuable and Extensive Deposit of Manganese Ore, desires the co-operation of individuals or a company to operate the same.

Openings have been made, and large quantities of ore found, which plainly show that two large veins or deposits extend through the property.

Quantity unlimited, accessible to market at a large profit.

Analysis shows Bix Oxide over 90 per cent., Metallic 57 per cent.

For full particulars, address,
H. P. O. Box 186, Baltimore, Md.

WANTED: A PARTNER

In a Hardware Store

With about \$3,000, situated in a growing and healthy town in Virginia.

ADDRESS P. O. BOX 96,
Baltimore, Md.

FOR LEASE.

The Lexington Manufacturing Company, of Lexington, Va., wishes to lease for a term of years its Foundry, Boiler and Machine Shops, fronting 300 feet on side tracks of B. & O. and R. & A. Railroads. These shops are thoroughly equipped with ample (water) power, and are ready for occupancy and use without the expenditure of a dollar. It is a fine opportunity for capitalists who wish to engage in any character of iron manufacturing in the heart of the iron region of the James River Valley, of Virginia. Address

THE LEXINGTON MANUFACTURING CO.

Lexington, Rockbridge Co., Va.

ARCTIC ICE MACHINE MFG. CO.

Works, 4, 6, 8 & 10 West Street, Cleveland, O.

Manufacturers of Machines for Making Ice and for Refrigerating Breweries, Pork Houses and buildings of all kinds requiring a steady, low temperature. Over 100 of our machines now in use. Send for any particulars desired. P. O. Box 92, Cleveland, Ohio, or P. O. Box 348 Cincinnati, Ohio.

Business Chances.

42-For the purpose of making the **MANUFACTURERS' RECORD** a still more valuable medium of communication between its readers North and South, we will publish, **FREE OF CHARGE**, short advertisements, not exceeding 40 words, from those in the South who have good business openings that they wish to bring to public notice, capital wanted for industrial enterprises, &c., &c.; while readers in other sections who desire to engage in manufactures at the South are also invited to use these columns, without cost, either in seeking information regarding the advantages and special claims of different localities, or for asking about good openings for men and money. This department is also free for Southern manufacturers who wish to advertise for mill managers, superintendents, engineers, &c.

In corresponding with any of these advertisers please mention the **Baltimore Manufacturers' Record**.

Parties advertising in this column must have replies sent to their own address, and not to care of Manufacturers' Record, unless stamps are sent for forwarding replies. Advertisements sent not in accordance with this requirement will not be inserted.

WANTED—To open correspondence with capitalists in reference to the building of an important railroad link of 25 miles between two "Trunk Lines," and the development of the finest yellow pine timber and the largest and most valuable cypress swamp timber in the South, 40,000 acres of which are under contract. The charter and all rights of way secured and five miles of road bed finished, crossing the only two streams on the line. A rare opportunity is offered to those desiring to engage extensively in the lumber trade. We invite correspondence and a personal investigation of the scheme. Address P. O. Box 67, Sumter, S. C.

WANTED—By a competent man a position as overseer of a spinning room. Can give first-class recommendation. Address, Overseer, care MANUFACTURERS' RECORD.

WANTED—A set of good woolen machinery, or a one-set woolen mill in a good location, in exchange for 800 acres of good land. Any one who may have the above will do well to correspond with the undersigned, giving description of machinery, etc. Address, J. T., Olympia, Smyth county, Va.

FOR SALE—An established business and a splendidly built two-story brick building erected expressly for it. Fine opening for a man of small means, who wants to engage in the manufacturing, repairing and selling of buggies, wagons, plows, etc. Reason for selling: Desire to engage exclusively in the manufacture of farm wagons for the wholesale trade. Apply or write to Owensboro Wagon Manufacturing Co., Owensboro, Ky.

VALUABLE LAND FOR SALE—470 acres. About 140 acres open in fair state of cultivation; is level; good neighborhood; 2 miles from railroad depots, churches and schools; perfectly healthy; title good; also 1230 acres in wood and 240 acres in another tract; a part cleared; all near railroad. For further particulars address, P. O. Box 27, Rockingham, Richmond county, N. C.

WANTED—Pattern Maker and Draftsman, with two or three thousand dollars, to take an interest in an established engine, saw mill and boiler works, to work under salary. The entire plant is new; equipped with the best tools; has been in operation two years. Books will show a dividend of 25 per cent. Located in a fine Southern city of ten thousand inhabitants, has the best of prospects for future business. Machine shop, foundry and boiler shop operated by practical men, who are stockholders and all workers. Reference required and given. For further particulars address N. S., care of Baltimore MANUFACTURERS' RECORD, Baltimore, Md.

WANTED—A partner who is skilled in the manufacture of cedar in its various forms. Send estimate of cost of necessary machinery to be run by water. Address, James U. Vincent, Glen Rose, Texas.

A PRACTICAL MAN has money to invest along with some local capital in building and operating an ice factory in any good locality in the South. Would like to receive information as to places where there is an opening. Address, Bristol, care MANUFACTURERS' RECORD.

SITUATION wanted by a practical machinist, engineer, sawyer and saw filer. Address, J. B. Thomas, Melsom, Ga.

IRON FURNACE FOR SALE—One of the most desirable charcoal furnaces in Virginia, located in Wythe county, will be sold on liberal terms; abundance of fine ores, water and timber. Address J. A. Walker, Wytheville, Va.

WANTED—A purchaser for fine grass and fruit farm in the most beautiful and fertile portion of the "French Broad" valley, Transylvania county, half mile from town of Brevard, N. C. Climate unexcelled; mountain scenery grand; good frame dwelling and necessary outbuildings; orchard contains 2,000 apple trees and other fruits. Address S. E. Lucas, Brevard, N. C.

WANTED—A competent machinist who is qualified to conduct a foundry and machine shop, and comes well recommended, can purchase an interest in a well-established business at a bargain and secure constant employment. For particulars address F. B. Alexander, Hickory, N. C.

WANTED—To sell an old-established, prosperous, Democratic newspaper and printing business, in a beautiful and growing county-seat and railroad town of Texas, not very far from Austin; official paper of city and county. Address Editor, care MANUFACTURERS' RECORD.

SITE FOR COTTON MILL—90 acres of land just outside corporate limits of Atlanta, well drained, has water facilities for steam, lies alongside of railroad. Charter obtained; owners will place a fair valuation on the land, taking stock for same. Parties contemplating building cotton mill, address James W. Harle, Atlanta, Ga.

WANTED—To correspond with capitalists in reference to the building of an important railroad link of 20 miles, uniting two main trunk lines and developing valuable resources. Eight miles already graded. Piers and abutments built across a river. Charter and right of way will be transferred free to party or company who will complete the connection. Address A. F. Naff, Greeneville, Tenn.

PARTIES having capital that they desire to invest in manufacturing enterprises cannot find a more profitable chance than engaging in the shuttle, spoke and handle business in North Carolina. An established business that desires to enlarge wishes a partner with some capital. For particulars address J. Allen, Statesville, care of J. T. Patrick, Raleigh, N. C.

WANTED—A partner with \$2,000 capital in a handle factory, now established with good trade; have a good water power. Timber very cheap and location good. Address G. W. Simpson, Salisbury Furnace, Botetourt county, Va.

FINE water-power and mill in good running order, having a fine running stream; handsome residence, fine apple and grape orchard and other improvements; splendid timber lands adjoining. A partner wanted who will buy part or entire place. It is in the mountain section of North Carolina. For information address C. S. Thompson, Pigeon River, care of J. T. Patrick, Raleigh, N. C.

CAPTAIN J. J. FARR and other citizens of Glen Rose, Texas, will offer great inducements to a live, thorough, progressive educator, who will establish and conduct a high grade institution at that place.

MICA PROPERTY FOR SALE in Mitchell county, North Carolina. Address R. N. Penland, Bakersville, care of J. T. Patrick, Raleigh, N. C.

A GOOD CHANCE FOR INVESTMENT—A daily and weekly newspaper in one of the most progressive manufacturing towns in the "New South" is offered for sale at a bargain. An excellent chance for the right man to make money. Very little capital required. Satisfactory reasons given for wanting to sell. Apply to Milton A. Smith, Anniston, Ala.

A PARTNER WANTED with a small capital to engage in the mining and bringing into market a very valuable variety of wood and oil stones. For information address J. F. McLean, Grayson, care of J. T. Patrick, Raleigh, N. C.

A SKILLED Manufacturer of boots and shoes and of saddles and harness, can learn of a good opening by addressing William Allen, Glen Rose, Texas.

THE Talladega Oil Mill & Public Ginnery is offered for sale, or would form a stock company for manufacture of fertilizers and soap. Correspondence solicited. W. E. Yancey, Talladega, Ala.

WANTED—A partner with some capital to take interest in water-power and gold mining lands on the Catawba river, two miles of the flourishing town of Morganton. For information address A. L. Clark, Morganton, care of J. T. Patrick, Raleigh, N. C.

VALUABLE COAL PROPERTY FOR LEASE in Montgomery county, Va., two miles from railroad. Address Chas. C. Kasey, New River Depot, Va.

WANTED—A reliable man with \$1,500 cash, to engage in a lucrative business, in a great business center in the South. Address Energy, care of MANUFACTURERS' RECORD, Baltimore.

FOR SALE—280 acres of well-timbered land, with water-power, two miles of Henderson, N. C. Address R. Marston, Henderson, care J. T. Patrick, Raleigh, N. C.

Mr. MART MARTIN and other responsible citizens of Glen Rose, Texas, will form a partnership with an experienced distiller for the purpose of running a United States distillery in Somerville county.

FOR SALE—1 Ring Twister, 8 Patent Twisters with spools, shafting, pulleys and belting, for making patent seine twine from 9 to 36 thread. Part of the machinery run less than two months. Will be sold for half its value. Address, Gillette Twine Co., Mount Verd, Tenn.

WANTED—To sell a newspaper outfit very cheap. Also want to know of some locality desiring a weekly newspaper. Address, E. S. J., P. O. Box 91, Pulaski, Tenn.

WANTED—A party with small amount of capital to join in starting manufacturing of knit goods with Lamb or some other good, low-priced knitting machine. To the right party understanding the business a location will be furnished; also a nice building lot for a home given. Address A. F. Naff, Greeneville, Tenn.

FOR SALE—One-fourth or entire interest in a pottery on the line of the C. C. & A. R. R., near Aiken, S. C. Eleven hundred acres in tract, unfailing stream of water, inexhaustible supply and great variety of the finest clays (Kaolin). Plant complete and investment paying; more money needed to increase output to meet orders. Opportunity of investment to practical potter or one understanding the business unsurpassed. Address James G. Holmes, 60 Buchanan's Wharf, Baltimore, Md.

WANTED—Parties seeking oyster farms, early fruit or truck farms, for canning or other purposes, or those looking for any kind of business investment in Maryland, Virginia, Georgia or Florida, to address I. D. Barton, 4 Courtland st., Baltimore, Md.

DON'T BUY AN ENGINE OR BOILER until you have seen our circulars. Engines complete from

\$250 for 15 to \$550 for 60 Horse Power
Boilers of every style. Automatic Engines for Electric Lights. Centrifugal Pumping Machinery for Drainage or Irrigation. Established 22 years. Perfect satisfaction guaranteed. Address for circulars, MORRIS MACHINE WORKS, Baldwinsville, N. Y.

Get the Best at First.

The Holyoke Machine Company, of Worcester, Massachusetts, advertise in this issue their well-known Hercules Water Wheel. This wheel has many points of merit that strongly commend it to the attention of those who use water power. The most thorough tests have demonstrated its many good qualities. In Holyoke it is the standard water wheel, the aggregate horse power of the Hercules wheels in operation there being greater than that of all other wheels combined. These wheels are very popular in the South as well as in the North, having been in use for many years in a large number of Southern mills.

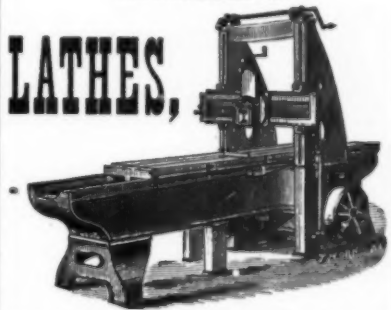
There are four of the Hercules wheels now in operation in the big cotton mills of the Eagle & Phenix Manufacturing Co., Columbus, Ga., and Mr. John Hill, of that company, in writing, Feb. 25, 1885, to the Holyoke Machine Co., said: "Within the past four years I have ordered four Hercules' wheels, all of which have given the purchasers entire satisfaction. Three of the wheels are on regular duty in the Eagle & Phenix Mills. The first wheel ordered did so well that a Hercules' wheel has been added each time a new wheel was wanted. In the Eagle & Phenix Mills I supervise twenty water wheels of six different styles. The Hercules' is by far the most durable and best made wheel in use here, and, in fact, I know of no wheel its equal mechanically. It is all that can be desired in economy of water. In fact, it is a strictly first-class wheel in every way, and the wheel to buy, use and depend upon."

That is a pretty strong letter, but it is only a sample of letters received by the manufacturers of this wheel. Among the recent shipment of wheels have been two—one a 34-inch and one of 60-inch—to a Georgia cotton mill. Two Hercules wheels are being put in at Natick Cotton Mill, and one at the Arctic Mill of B. B. & R. Knight near Providence. This will make eleven wheels furnished to this well-known firm, one of the most prominent in the manufacturing line in New England. Hercules wheels are sold in England, Ireland and Scotland, and on the Continent, a cable order having been received only a few days ago for one to go to France. The manufacturers say: "The Hercules gives the most power for its size and the highest average percentage from full to one-half gate of any wheel ever made." Their advice to all users of water wheels is to "get the best at first." If you are interested in water wheels, if you want a new wheel or a larger wheel, or a better wheel than you are using, write to the Holyoke Machine Co., Worcester, Mass., for catalogue No. 3.

Established 1867.

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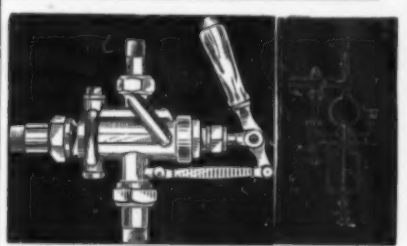
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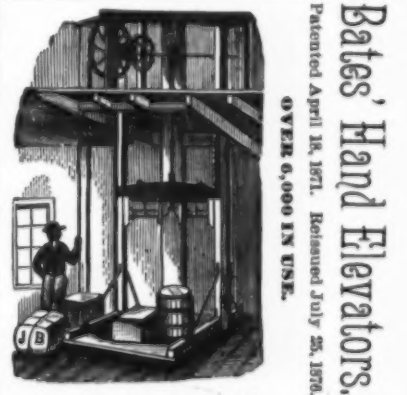
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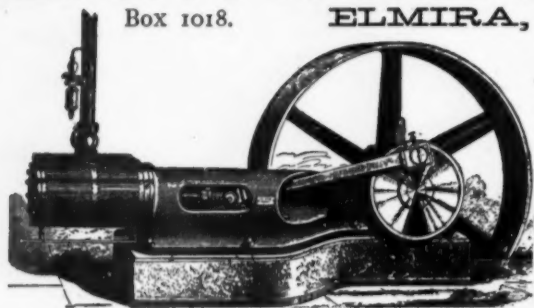
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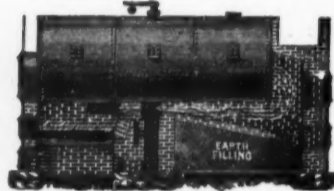
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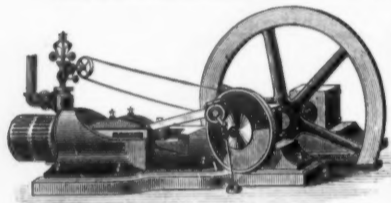
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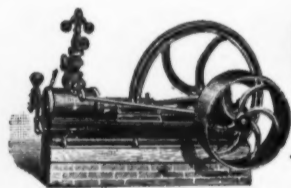
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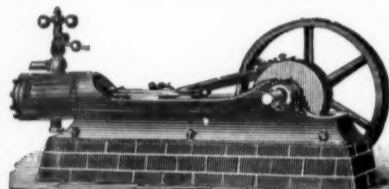
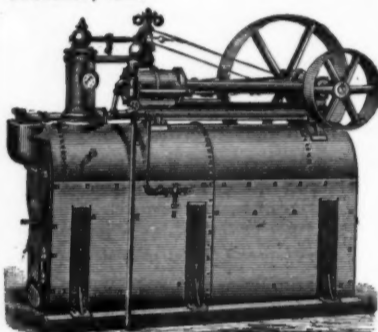
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A searching scrutiny is invited of the statements herein submitted with care and the most impartial intention. Visits from responsible applicants, with view to buy on personal certification of the offering, will be liberally facilitated.

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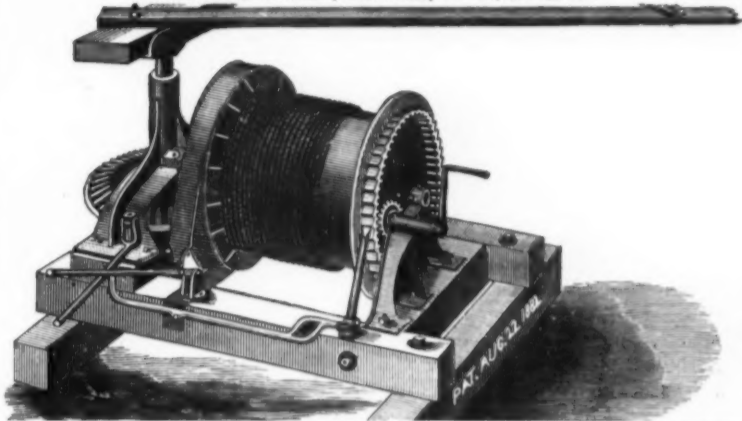
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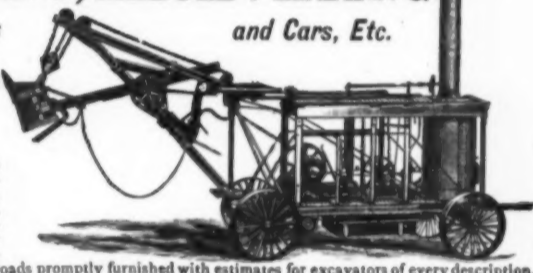
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Literary Notes.

TRIUMPHANT DEMOCRACY; or, Fifty Years' March of the Republic. By Andrew Carnegie. New York: Charles Scribner's Sons.

Mr. Carnegie, "born a subject of the Monarchy, adopted a citizen of the Republic," has the enthusiastic love and admiration for the land of his adoption, which can only come from an experimental study and comparison of the two forms of government, and which he says "the native born citizen can neither feel nor understand." The object of his book is to remove from the minds of English people their ignorance and misconceptions concerning our laws and customs and progress, and to "give to Americans a better idea of the great work their country has done and is still doing in the world." He makes an interesting and forcible presentation of the conditions of life, the progress that has been made in agriculture, manufactures and mining, in trade and commerce, in art and literature. He shows the growth of cities and towns, the extent of railways and waterways, the various occupations with the average income, mode of life, &c., of each. He treats of education, religion, and pauperism and crime. His statements are verified by statistics, and under his treatment statistics are no longer dry and tiresome. The book is intensely interesting and will be read with zest by all classes of people. It will give to Americans a better understanding of their own country, and a higher appreciation of and veneration for its institutions, and dwellers in other lands will learn from it something of the blessings of a free government.

THE place of honor in Cassell's Family Magazine for June is given to the serial "A Wilful Young Woman." The other serial, "Lyndon of High Cliffe," comes to an end in this number. The second contribution, "The Cruise of the Spendthrift," is an interesting account of a scientific cruise in Liverpool Bay. Mr. Froude's visit to "Oceana" is discussed, and there is a portrait of the historian given, which shows that he has changed very much since his first trip to America. "The Philosophy of Stocking Darning" is an amusing and practical paper by A. M. Hellier, which is followed by a careful description of the Bodleian Library at Oxford. A lover of archery contributes a paper on that delightful pastime, by means of which he hopes to infuse some of his own enthusiasm into his readers. "A New Peep at Old Florence" has much that is entertaining in it, and there are pretty poems, graceful stories, bright pictures, an usually well-filled "gatherer," and fashion letters from London and Paris. Cassell & Co., publishers.

THE June issue of the Southern Bivouac will contain an article on the "Sugar Fields of Louisiana," by R. A. Wilkinson, accompanied by a number of illustrations. Mr. Wilkinson gives a short historical sketch of the sugar interest, and a pleasing picture of life on a sugar plantation. Paul H. Hayne has prepared for the same number a sketch of the public services of Charles Gayarre, of New Orleans. This article will be followed by a review of Judge Gayarre's literary labors, and Dr. Felix L. Oswald will conclude the interesting series of articles on "Our Last Hunting Grounds," with a paper on the Rocky Mountain region. Dr. Oswald is preparing a series of articles on Southern summer resorts to appear in the Southern Bivouac.

THE frontispiece of the Magazine of Art for June is Constable's Hay-Wain, a picture for which the original owner gave about £70, and which was recently purchased for a fabulous sum and presented to the national gallery by a Mr. Vaughn. "Guilford" is the subject for a most enticing pen and pencil study. This paper is followed by one on Alexander Cabanel. A portrait of the painter is given, also a reproduction of his

famous "Desdemona." Following close upon this is a paper on "Some English Carriages," which are illustrated by some curious cuts. "The Cottage Countess," by which is meant Sarah, spouse of Henry Cecil, Earl of Exeter, is the subject of the paper on "The Romance of Art." Next we have a spirited page, "Driving Horses in Hungary," from the original of Heinrich Lang. An article that will interest all metal workers is one on "Celtic Metal-Work," during the Christian period. Charles IX's is the profile cut from the French Renaissance. The poem and picture is by Harold Boulton and Charles Whympier. An important contribution to this number of the magazine is an article on E. S. Morse's "Japanese Homes and Their Surroundings," by William Anderson, than whom no one is better calculated to write upon this subject. If the engraver has not flattered the work of Her Royal and Imperial Highness the Crown Princess of Germany, she is certainly a clever artist, and has talent beyond that usually possessed by royalty. An interesting paper on "Needle-work as Art," and a copious supply of notes close a very entertaining number, Cassell & Company, publishers, New York.

HON. DAVID A. WELL's third paper of the series, entitled "An Economic Study of Mexico," now running through "The Popular Science Monthly," will appear in the forthcoming June number. The series will close with the fourth paper, and it promises, when completed, to be the fullest as it will unquestionably be the most accurate summary of the real condition of affairs, industrial, commercial, and political, in Mexico, that has appeared since the Mexican War.

It is often said that few, if any, stories worthy of publication come to publishers in the ordinary round of "manuscripts received." But that good things do sometimes come from untold authors will be proved by the three next issues in Cassell's Library Edition of Novels. One of these, "As Common Mortals," will be published anonymously, the author preferring to remain unknown. It is a strong story, the scene of which is laid in Brooklyn. Another, "The Magic of a Voice," is by an American lady, Margaret Russell Macfarlane. The scene of this story is laid in Germany, and it is so thoroughly suffused with the atmosphere of that country that it was at first supposed to be a translation, but inquiry proved it to be original and it was accepted. The other, "Who Was Guilty?" is a curious tale of love, murder, detectives and morphine, with a denouement that will astonish the reader. It is by a physician, Dr. Philip Woolf, who has used his materials most ingeniously and woven a story that will be hard to lay down until finished.

Cash or Credit.

The average cash price for corn in North Georgia 1st of May was 54 cents, in Middle Georgia 66 cents, in Southwest Georgia 70 cents, in East Georgia 71 cents, and the average price in the State 67 cents.

The average credit prices 1st of May in North Georgia was 76 cents, Middle Georgia 85 cents, in Southwest Georgia 97 cents, in East Georgia 108 cents, and in the whole State 92 cents.

This is information we get from Commissioner Henderson's May crop report.

A farmer able to pay cash can get corn at 67 cents a bushel, but if buying on credit he has to pay 92 cents, or 25 cents more. The difference is frightful. It is over 27 per cent. interest for about 8 months' credit, or 40 per cent. a year.

It is little to be wondered at that our farmers are behind, as a rule, and come out on the side of loss in the farm operations.

The farmer should make his own corn, and any system is wrong that involves the purchase of supplies. But when bread has to be bought at 40 per cent. interest, the plan is fatal. Such a ruinous rate of interest will kill any business.

The different percentages in the sections are curious and interesting. In Middle Georgia the difference between cash and credit is only 19 per cent., in North Georgia 22, in South Georgia 27, and in East Georgia the enormous per cent. of 37.

The matter is full of striking significance. We repeat what we have said before, that the only policy for the farmer is to raise his own supplies, make cotton his surplus crop, and economize and live hard until he can live better without going into debt.—Atlanta Capital.

THE MARKETS.

OFFICE MANUFACTURERS' RECORD,
BALTIMORE, May 19, 1886.

The disturbed condition of the labor market continues to exert a depressing effect upon trade and manufactures, but the belief seems to be spreading that the worst of the trouble is over, and that business will soon show more signs of activity. The extravagant demands of the laborers, and the riots resulting from the strikes, have combined to defeat the 8-hour movement as a whole, though here and there the 8-hour system has been adopted. With a settlement of the labor question, there would soon come a general improvement in business, and more activity in industrial matters especially.

In manufactured iron the market holds its own, but shows no advance, prices continuing as last reported, viz:

Ref. Bar Iron, 1 to 6 3/4 to 1.....	1.85@ 2 c
" " 1 to 4 3/4 to 1.....	1.85@ 2 c
" " 3/4 to 2, round and	1.85@ 2 c
square.....	1.85@ 2 c
Hoop Iron, 1 1/2 wide and upward.....	2 1/2@ 2 3/4 c
Band Iron, from 1 1/2 to 6 in. wide.....	2.30@ 2 1/2 c
Horseshoe Iron.....	2.75@ 3 c
Norway Nail Rods.....	4 1/2@ 5 c
Black Diamond Cast Steel.....	9 @ 10 c
Machinery Steel.....	3 1/2@ 4 1/4 c
Spring Steel.....	3 1/2@ 4 c
Common Horse Nails.....	8 @ 9 c
Railroad Spikes, 5 1/2 x 9-16.....	2 1/2@ 2 3/4 c
Horse Shoes, 1/2 keg.....	3 85
Mule Shoes.....	4 85
Steel Boiler Plate.....	3 1/2@ 3 3/4 c
Iron Boiler Plate.....	2 1/2@ 3 c
Boiler Tubes.....	5 1/2 off list

The pig iron market is without material change. For common brands prices are weak, but best brands are held at full rates. We quote about as follows:

Baltimore Charcoal Wheel Iron (all	
Baltimore ore).....	\$25 00@26 00
Virginia C. B. Charcoal Wheel Iron.....	25 00@26 00
Anthracite, No. 1.....	18 00@19 00
" " 2.....	16 00@17 00
" " 3.....	15 00@16 00
" " Moistened and White.....	13 00@14 00
Old Iron Rails.....	19 00@20 00
Old Iron Rails, D. H.....	20 00@21 00
Old Steel Rails.....	20 00@22 00
No. 1 Wrought Scrap.....	19 00@20 00
Old Car Wheels.....	15 00@16 00

HARDWARE.

The demand for hardware continues moderately, fair with prospects regarded as favorable for a good trade later on, unless business continues to suffer from prolonged labor agitation.

Nails are in only moderate demand, building operations being restricted by the strikes. Prices are still quoted at \$2.00@2.10, according to quantity.

Philadelphia Iron Market.

PHILADELPHIA, May 18, 1886.

Inquiries have been made during the past few days for some 60,000 or 70,000 tons of steel rails at \$34.50 to \$35.00. Quite a number of small orders have come to the mills during the past three or four days. It is becoming more evident that there will be a large mid-summer demand for steel rails for fall delivery. It is understood that an increased allotment of 100,000 tons has been practically agreed upon without any meeting of the Board of Control of the steel rail syndicate. Three or four western roads are in the market, among them the Chicago, Burlington & Quincy, the Chicago & Northwestern, the Denver & Rio Grande, the Atchinson, Topeka & Santa Fe, and one or two others. There are no grounds for the rumor of an advance in price, but the probability is still recognized. The past week has been quite a good one for the plate iron and skelp iron makers and among the wrought iron pipe makers a good week's business has been done. There have been no large sales of structural iron, but the usual amount of small orders are crowding in at 3 cents, combination price. Large lots of skelp are selling at 1.80; angles are 1.90 to 2 cents; tank iron 2. The locomotive works and ship yards will be in the market shortly for a good deal of material, and it is said to-day that two or three brokers, representing foreign houses, have secured

one or two large contracts for interior delivery. Information on this point is difficult to obtain, as the buyers think they are doing something they do not want known. Very little business has been done of late in old rails. Agents who have been canvassing the interior think they will be able to sell a great deal of material this summer, as none of the larger consumers have stocks of any account. The sheet iron makers have picked up enough business to put on a few extra furnaces. The plate iron makers are quite pleased with the prospects. The wholesale metal houses report an increased inquiry among retailers. The coal trade is improving. The Reading Company mined 252,000 tons last week.

Cincinnati Iron Market report.

Specially reported by ROGERS, BROWN & Co., Pig Iron Commission.

CINCINNATI, May 17, 1886.

The market has been dull for the week past. There has been, however, a run of small orders for prompt delivery that have made a moderate aggregate of business. The labor situation is not cleared up yet, and dealers do not expect any considerable buying movement until manufacturers are in position to know whether they will continue work and what wages they will pay. Most of the foundries in this region have reached an agreement with their men, but strikes among machinists, safe-makers and other trades have greatly restricted the demand for castings, and work is proceeding on a reduced scale. Prices for such business as is going stand where they have been since the first of the month. A large order would probably induce competition that would shade a trifle the maximum figures we name.

List of Patents.

The following Patents were granted to citizens of the Southern States, bearing date May 11, 1886. Reported expressly for this paper by Louis Bagger & Co., Mechanical Experts and Solicitors of Patents, Washington, D. C.

Bailey, J. H., Leading Creek, W. Va. Chimney-protector.....	341,440
Bauer, C. V., Nicholasville, Ky. Horse-collar pad fastener.....	341,719
Buckle, Charles, San Antonio, Tex. Two-wheeled vehicle.....	341,830
Carver, J. N., Lebanon, Tenn. Cistern faucet.....	341,730
Cherry, F. F., Stonewall, N. C. Planter.....	341,452
Cooper, B. F., Center, Tex. Hydraulic-motor.....	341,732
Hardison, T. V., and C. C. Bowman, Wadesboro, N. C. Planter.....	341,747
Himes, Frank, Bracket, Tex. Billiard-table leveler.....	341,481
Home, A. M. D., Baltimore, Md. Tuning-gage for stringed instruments.....	341,846
Ingle, E. W., Fort Worth, Tex. Safety-valve attachment for lamps.....	341,483
Kelly, W. T., Elberton, Ga. Carpenter's bevel.....	341,753
Le Grande, W. W., Louisville, Ky. Railway-signal.....	341,666
Mallonee, J. C., Charleston, S. C. Mixed-paint.....	341,588
Martin, J. B., Carrollton, Ga. Farm-gate.....	341,590
McCauley, R. A., Baltimore, Md. Dumping-wagon.....	341,592
Moore, J. P., Snow Hill, Md. Circular-saw-mill.....	341,678
Pearce, W. W., Clanton, Ala. Hame-fastener.....	341,681
Pickersgill, John, Central City, Ky. Wagon-brake.....	341,685
Powers, A. P., and S. W. Wilkes, Atlanta, Ga. Seal-lock.....	341,502
Randolph, G. W., Memphis, Tenn. Cotton-scraper.....	341,688
Reaney, R. M., Harlem, Ga. Cotton, corn and pea planter.....	341,505
Rice, K. F., Eureka Springs, Ark. Harness attachment.....	341,507
Stow, Lorenzo, Rome, Tenn. Horse-hay-rake.....	341,517
Sully, R. M., Petersburg, Va. Seal-lock.....	341,779
Sully, R. M., Petersburg, Va. Seal-lock.....	341,780
Zanetti, F. C., Bryan, Tex. Medicine-case.....	341,621

PATENTS FOR INVENTIONS.

(American and Foreign) Trade Marks, etc., procured through the agency of

Arthur C. Fraser & Co.

TEMPLE COURT, NEW YORK CITY.

(Entrance 5-7 Beekman St.) Hand-book of information sent free to any address.

It is very certain that prices cannot go much lower, unless the whole basis of cost is reconstructed or producers draw on their capital for the pleasure of making sales. We quote for cash f. o. b. cars Cincinnati:

HOT-BLAST FOUNDRY.	
Ohio and Southern Strong Coke No. 1.	\$17 00@17 50
" " " " No. 2.	16 00@16 50
" " " " No. 3.	15 50@16 50
Ohio Soft Stonecoal, No. 1.	17 50@18 00
" " " " No. 2.	16 50@17 00
Mahoning and Shenango Valley Coke, No. 1.	18 00@19 00
CHARCOAL IRON.	
Hanging Rock, No. 1.	\$20 00@21 00
" " " " No. 2.	19 00@20 00
Tennessee and Alabama, No. 1.	18 00@19 00
" " " " No. 2.	17 00@18 00
FORGE.	
Strong Neutral Coke.	\$15 00@15 50
Mottled " " "	14 50@15 00
Cold Short.	14 00@14 50
CAR WHEEL AND MALLEABLE.	
Southern Car-Wheel Iron.	\$21 00@25 00
Hanging Rock C. B.	20 00@25 00
" " " " W. B.	21 00@23 00
Lake Superior Malleable.	23 00@24 00

Specially reported by E. L. HARPER & Co.
CINCINNATI, May 17, 1886.

No change to report since our last. We quote for cash on wharf and cars here:

FOUNDRY.		Cash.
Hanging Rock Charcoal, No. 1.	\$19 50@20 00	
" " " " "	18 50@19 00	
Southern Charcoal " "	17 50@18 00	
Strong Neutral Coke, " "	17 50@18 00	
American Scotch, " "	17 50@18 00	
GREY FORGE.		
Neutral Coke.	14 50@15 00	
Cold Short.	14 50@15 00	
CAR WHEEL AND MALLEABLE.		
Hanging Rock, strictly cold blast.	25 00@26 00	
Hanging Rock, strictly warm blast.	21 00@21 50	
"Cranberry," N. Carolina Warm Blast.	21 00@21 50	
Amherst and Virginia Warm Blast.	21 00@22 00	
Lake Superior Charcoal, all grades.	23 00@24 00	

Louisville Iron Market.

Specially reported by W. B. BELKNAP & Co., Nails, Wire, Iron, Hardware, Carriage and Wagon Goods.

LOUISVILLE, KY., May 17, 1886.

A spell of weather intense enough in its high temperature to be classed by the newspapers under their favorite heading of a "heated term" has been ours for a week past. We feel, however, so fortunate at having escaped the severe cyclonic disturbances which have passed around us, that we are not disposed to grumble at any sort of dispensation.

Trade is in general quiet. May and June are apt to be dull months at the best, and this year, by reason of labor disturbances, they have good cause to be.

Bar iron is steady. Mills are anxious to secure orders for immediate execution, but are not seeking to obligate themselves for the future.

Sheet Iron.—Some manufacturers claim to be maintaining without trouble an advance of from \$1 to \$2 per ton for light sheets, but no change sufficient to stimulate buying has taken place.

Nails.—The action of the Nail Association on the 12th in its radical cut was a surprise to the trade in general. It is understood that some of its own members did not favor so great a reduction, but that others thought an aggressive policy would be the best in the end.

Wire.—There is a fair business doing in wire, but the spring rush is pretty well over.

Merchants in some sections are asking extensions until fall crops begin to come in. Early summer fruits and vegetables are now abundant, which furnish some cash means to the farmer, and consequently benefit his merchant as well. We quote:

Bar Iron.	1 80@1 90
Crescent Steel.	10 @ 12
Plow Steel slabs.	3 50 @ 75
No. 27 Sheet.	3 50 @ 3 75
Galvanized sheet, best.	50 @ 55%
Galvanized Iowa bar wire.	4 75 @ 5 00
Burden Shoes.	13 @ 25
Junata Shoes.	13 @ 25
Carriage Bolts.	75 @ 10%
Steel nails.	2 65 @ 2 75
Iron nails.	2 50 @ 2 60
Rope, Sisal.	8 @ 8%
Rope, Manila.	12 1/2 @ 13
Screws, American Screw Co's list.	75 @ 80%
Axes.	6 50 @ 6 75
Cross cut saws, wide, per foot.	25 @ 35cts.
Cross cut saws, narrow, per foot.	21 @ 23cts.

Specially reported by Geo. H. HULL & Co., Commission Merchants for the sale of Hot and Cold Blast Pig Iron.

LOUISVILLE, KY., May 17, 1886.

The market for pig iron during the last week has been almost entirely nominal.

Sales have been confined to small lots that parties were absolutely obliged to have to continue work. There has been no disposition to press iron on the market, and no sales have been made that will justify any change in quotations, but it is likely if any lots were forced off at this time that they would have to go below our inside quotations. No improvement is looked for until the prospect of the labor trouble is settled. We quote for cash as below:

PIG IRON.	
Southern Coke, No. 1 Foundry.	\$17 00@17 50
" " " " " "	16 00@17 00
" " " " " "	15 50@16 00
Hanging Rock Coke, No. 1 Foundry.	16 50@17 00
" " " " " "	19 00@20 00
Southern Charcoal, No. 1 Foundry.	17 50@18 50
Silver Gray, different grades.	15 00@16 00
Southern Coke, No. 1 Mill, Neutral.	15 00@15 50
" " " " " "	14 00@14 50
" " " " " "	14 50@15 00
Southern Charcoal, No. 1 Mill.	17 00@17 50
White and Mottled, different grades.	13 00@14 00
Southern Car Wheel, standard brands.	25 00@26 00
" " " " other brands.	21 00@22 00
Hanging Rock Cold Blast.	25 00@26 00
" " " " Warm.	20 00@21 00

Chattanooga Iron Market.

Specially reported by LOWE & TUCKER, Brokers and Commission.

CHATTANOOGA, TENN., May 17, 1886.

General business can be reported as good. All the crops are catching up the time lost by a late spring and are now nearly up to time, and are looking well. Some embarrassment is being experienced by large producers of lumber, whose markets have been North and West, caused by some of the large contracts being suspended in consequence of the labor troubles. So far, however, no trouble has been experienced in their getting their paper tided over until times change. The condition of the pig iron market can hardly be described. The greatest obstacle now, however, is in getting cars to ship. The near approach of the time of the change of gauge has side-tracked thousands of cars in preparing them for the narrow gauge, but the next two weeks will probably solve that problem. On large lots a concession in prices may be conceded of from \$1.00 to \$1.50 per ton, although the product of favorite brands is held firm and is sold well ahead. We quote:

No. 1 Foundry.	\$15 50 @ 16 50
No. 2 Foundry.	14 50 @ 15 50
American Scotch.	14 50 @ 15 00
Gray Forge.	13 00 @ 14 00
Car-Wheel Iron.	23 00 @ 25 00
Ores, Red and Brown.	1 50 @ 2 25
Furnace Coke.	2 00 @ 2 30
Nails, car-load lots, 30 days.	— @ —
Bar Iron, per 100 lb.	— @ 75
Old Rails.	— @ 21 00
Old Wheels.	— @ 15 00
Wrought Scrap, No. 1.	— @ 70
" " No. 2.	— @ 50
Cotton Tie Clippings.	— @ —
Cast Scrap.	— @ —
Railroad Splices.	— @ 1 85
Railroad spikes.	— @ 2 25
Light Steel Rails, long ton.	— @ —
Barb wire—Cambridge link.	— @ —
Barbed wire—four point galvanized.	— @ —
Barb ware.	— @ —

St. Louis Iron Market.

Specially reported by ROGERS, BROWN & Co., Gay Building, 204 N. 3rd street, St. Louis. W. H. SHIELDS, Manager.

ST. LOUIS, May 17, 1886.

We have had no end of strikes in this district, but the strikers have almost, in every instance, gone back at old prices and terms. So far the 8-hour day has been the grand fizzle. The demand has been limited, but prices have been well maintained, sellers realizing that it was useless to make concessions under the circumstances. We quote:

HOT-BLAST CHARCOAL.	
Missouri.	\$17 00@18 50
Southern.	18 00@19 00
Ohio.	— @ —
COKE AND COAL.	
Missouri.	— @ —
Southern No. 1.	18 50@18 75
Southern No. 2.	17 50@17 50
Southern No. 3.	— @ —
American Scotch.	17 00@21 00
MILL IRONS.	
Missouri.	16 00@17 00
Southern.	15 00@16 00
CAR-WHEEL AND MALLEABLE IRON.	
Southern.	20 00@25 00
Lake Superior.	21 00@23 00
MISCELLANEOUS.	
Old Wheels.	19 00@21 00
Old Rails.	13 00@16 50
Cannelville Coke, East St. Louis.	— @ 5 85

TRADE NOTES.

RILEY & GRAY, of Boston, have secured the sole control for this country of the Horrocks patent stop motion drum spooler. This is a very popular machine. Over 50,000 spindles have been sold within the last few years. It is made from 2 to 12 ply, but mostly for 4 ply. It is simple and reliable, and is equally good for cotton, woolen, worsted or silk.

THE Duplex Steam Heater Co., No. 10 Barclay street, New York, have issued new catalogues with illustrated descriptions of the Duplex Steam Heater and their new American Automatic Steam Heater. They contain much that will be of interest to architects, contractors, and others interested in the heating of buildings.

Important.

The improvements of the Grand Union Hotel are simply elegant, and the hotel is always kept in perfect order. It is so convenient to all the depots that guests arriving by the Grand Central Depot have their baggage transferred to and from the Grand Union Hotel in five minutes, free of charge. Guests arriving by steamer or railroad, South, North, East or West, are conveyed to the Grand Union Hotel by the elevated railroad for five to fifteen cents, thereby saving \$3 carriage hire. During the past year 110,000 people occupied the 613 rooms of the Grand Union Hotel at \$1 and upwards per day, including of course its elegant suites of rooms for families on the European plan. The dining-rooms, restaurant, cafe, lunch and wine-rooms were supplied with the best at moderate prices. Families lived better at the Grand Union Hotel, and for less money, than at any other first-class hotel in New York.

No hotel keeps up its standard and good name better than the American House, Boston, and it is noted all over the country for its superior accommodations and most excellent management.

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As these Lubricators are covered by patents owned solely by this Company, parties should order only the "DETROIT SIGHT FEED CURS," thus securing the best article and avoiding all legal complications. Liberal discount to the trade.

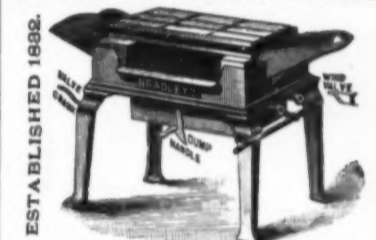
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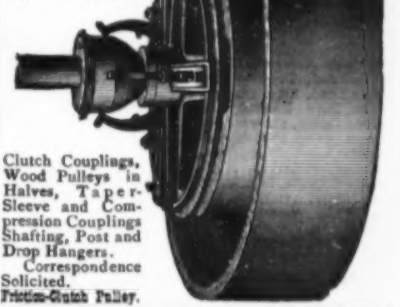
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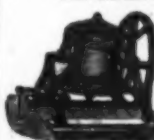
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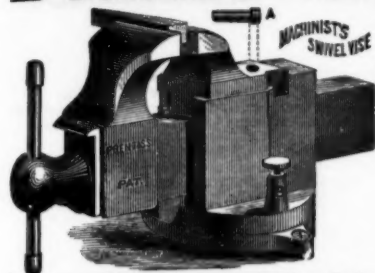
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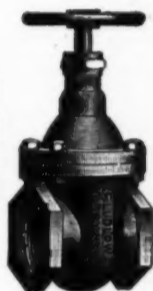
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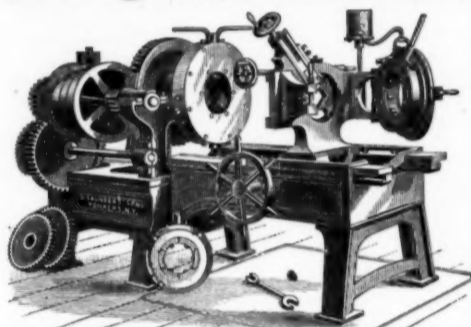


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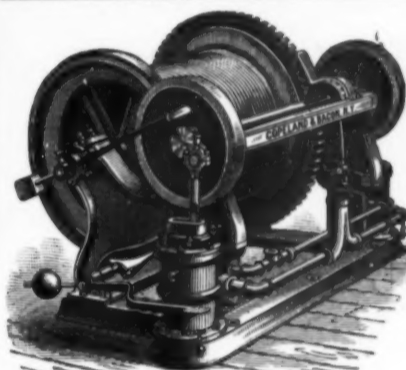
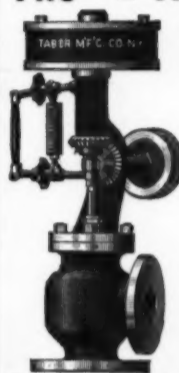
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The Babcock & Wilcox Water Tube Boilers.

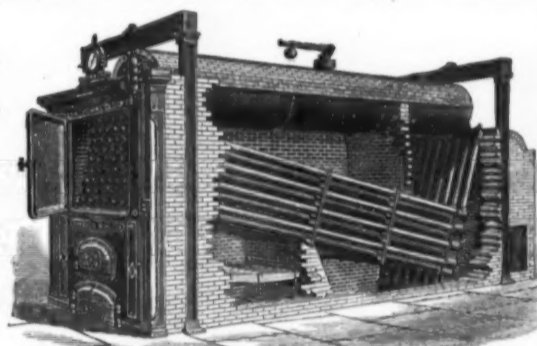
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John Chatillon & Son.—Spring Balances.
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W. T. Mersereau & Co.—Stair Rods, Dog Collars, &c.
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B. Seitz.—Root Hammers.
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BACNALL & LOUD BLOCK CO. BOSTON, MASS.

Largest Manufacturers of Tackle Blocks in the World.

Manufacturers of the Latest Improved Self-Adjusting ROLLER BUSHED and GENUINE METALINE BUSHED
and Iron Bushed Rope and Iron Strapped

TACKLE BLOCKS.



Improved Self-Adjusting Roller Bushed Iron Sheave.

Send for the Celebrated
STAR BRAND.



Improved Harcourt Patent Block.

Send for Catalogue
No. 5.



Improved Self-Locking Link Snatch Block.

OFFICE AND WORKS:

Euclid Ave. Station.

CLEVELAND HARDWARE CO.

CLEVELAND, OHIO.

Manufacture PATENT WROUGHT IRON HAND AND POWER SHEARS,

With and Without Punch Attachment, For CUTTING and PUNCHING.

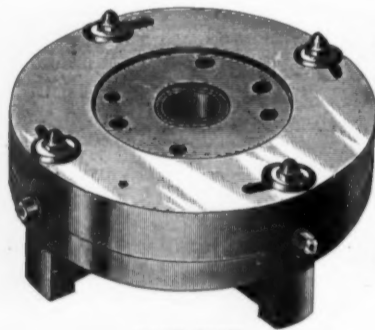
IRON and SOFT STEEL.

Also a Full Line of **WAGON HARDWARE.**

SPECIAL SHAPE AND MERCHANTS' IRON.

Collins' Brake, Patent Wagon Box Rod, Wrought Iron Seat Spring Hooks, Lockpin Clevis and Clip (for doubletrees,) Stay Chain Ring, Wagon and Implement Clevises, Wagon Box Stop Bolts, Wrought Iron Bolster Plates, Hammer Strap, Wagon Box Iron, Axle Clip, Wagon Seat Springs, Buggy Toe Rail, Buggy Rub Irons, New Style Pole Cap and Hold Back, Hold Back and Wear Iron, Side Braces, King Bolts, Reach Pins, Doubletree Plates, Stay Chain Bolts, Staples, Coupling and Tongue Plates, Circle Posts, Singletrees, Clips, Singletree Irons, and a Full and Complete Line. We solicit correspondence with THE TRADE and will send illustrated catalogue, prices and discounts upon application.

NEW PATENT COMBINATION LATHE CHUCK.



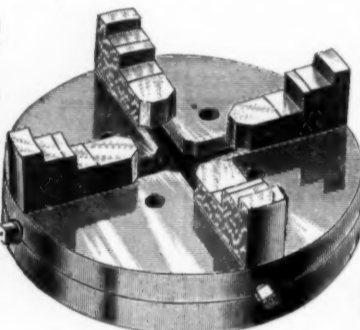
BACK VIEW.

This Chuck is constructed
upon the same general principles
as the well-known

Horton Chuck

with the additional feature that
it can be used either as an

*Independent,
Universal Concentric
or Eccentric.*

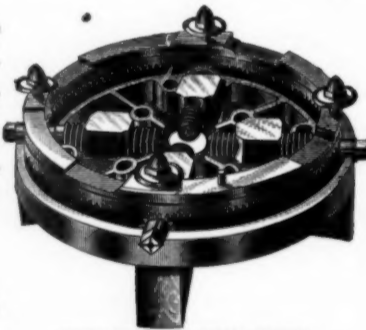


FRONT VIEW.

Warranted to be the
Strongest, Most Ac-
curate, and Easily
Operated Combina-
tion Chuck in the
market.

TRADE MARK:

The Horton Lathe Chuck.



VIEW OF WORKING PARTS.

Manufactured by THE E. HORTON & SON CO., WINDSOR LOCKS, CONN., U. S. A.

Send for Illustrated
Price-List.



SEND FOR ILLUSTRATED CATALOGUE AND
MENTION THIS PAPER.

J. E. Bolles & Co's WIRE and IRON WORKS,

DETROIT, MICHIGAN.

Iron Fence and Roof Cresting, Wrought Iron Fence, Builders' Wire and Iron Work, &c.



The Manufacturers' Record

is the most thorough, complete and authentic source of information on Southern industrial affairs in existence. The subscription price is only \$3.00 a year. Some of our subscribers think every issue is worth that much. Try it for a year. Send in your subscription *to-day*. Don't wait until to-morrow; you may forget it.

→ HARDWARE. ←

Baltimore Wholesale Prices.

ANVILS.
Eagle and Vulcan..... 10 c. dis 20%
Wright's..... 9 1/2 c.
Armstrong's Mouse Hole..... 8 1/2 c.
Trenton..... 10 1/2 c.
Wilkinson's..... 10 1/2 c.

AUGERS AND BITS.
Conn. Valley Mfg. Co..... dis 60¢ 10¢ 10¢
Douglas Mfg. Co..... 7 1/2¢ from list of
Ives..... Jan. 7, 1880
Cook's Douglas Mfg. Co..... dis 60¢ 10¢
Griswold..... dis 50¢ 10¢
Patent Solid Head..... dis 25 %
Russell Jennings' Auger, Dowell, Machine.
Dowel and Hand Rail Bits..... dis 10¢ 10¢ 10¢
Ives' "Jennings" Bits..... dis 40¢ 10¢ 10¢
Expansive Bits, Clark's small, 1/8; large, 26..... dis 25 %
Expansive Bits, Ives'..... dis 30¢ 10¢ 10¢
Expansive Bits, Blake's..... dis 40 %
Hollow Augers, Ives'..... dis 25 %
Hollow Augers, Douglas'..... dis 25¢ 10¢
Hol. Aug., Bonney's Adjust., 1/2 doz 4 1/2, dis 25¢ 10¢
Hol. Aug., Steam's Adjust., 1/2 doz 4 1/2, dis 25¢ 10¢
Hol. Aug., Ives' Expansive, each 4 1/2, dis 30¢ 10¢
Hol. Aug., Universal Expansive, each 4 1/2, dis 25 %
Wood's..... dis 25 %
Gimlet Bits..... 7 1/2¢ gross, dis 50 %
Gimlet Bits, Diamond..... 1/2 doz 4 1/2, dis 40 %
Double Cut Gimlet Bits, Shephardson's..... dis 40 %
Double Cut Gimlet Bits, Douglas'..... dis 33 1/2 %
Double Cut Gimlet Bits, Ives'..... dis 50 %
Morse's Bit Stock Drill..... dis 25 %
L'Hommedieu's Ship Augers..... dis 15 %

AWL HAPES.
Sewing Brass Ferrule..... 3 1/2¢ gross—dis 40¢ 10¢
Patent Sewing, Short..... 1 1/2¢ gross—dis 40¢ 10¢
Patent Sewing, Long..... 1 1/2¢ gross—dis 40¢ 10¢
Patent Peg, Plain Top..... 1 1/2¢ gross—dis 40¢ 10¢
Patent Peg, Leather Top..... 1 1/2¢ gross—dis 40¢ 10¢

AWLS, BRAD SETS, &c.
Awls, Sewing, Common..... 75c. to \$1
Awls, Shouldered Peg..... 75c. to \$1
Awls, Patent Peg..... 75c. to \$1
Awls, Shouldered Brad, 1/2 doz \$2.70—dis 25¢ 10¢
Awls, Handled Brad, 1/2 doz \$2.70—dis 25¢ 10¢
Brad Sets, Aiken's..... 1/2 doz \$1.20—dis 45¢ 10¢
Brad Sets, No. 42, 1/2 doz; No. 43, 1/2 doz..... dis 70 %
Brad Sets, Stanley's Exc. No. 1, 1/2 doz..... dis 30¢ 10¢
Brad Sets, Stanley's Exc. No. 2, 1/2 doz..... dis 30¢ 10¢
Brad Sets, Stanley's Exc. No. 3, 1/2 doz..... dis 30¢ 10¢

AXES.
Collins & Co..... \$7.25; beveled..... \$7.75
Cohoes Mfg. Co..... \$7.25; beveled..... \$7.75
Lippincott or Mann's.....
Single Bit, 1/2 to 3/4 and under..... 1/2 doz \$6.50 net
Single Bit, 3/4 to 6 and over..... 1/2 doz \$7.00 net
Single Bit, beveled..... 1/2 doz \$6.50 net
Double Bit, 1/2 to 3/4 and under..... 1/2 doz \$12.00 net
Double Bit, 3/4 to 6 and over..... 1/2 doz \$13.00 net
Double Bit, beveled..... 1/2 doz \$12.00 net
Second quality Axes..... 50 cts. less than above

AXLES.
Sheldon & Co., iron..... 55% off
" " steel..... 55% off
AXLE GRASS—FRASER'S...... 1/2 lb. 6c.
BALANCES.
Spring Balances..... dis 40¢ 10¢

BELLS.
Hand, Light Brass..... dis 75¢ 10¢
Hand, White Metal..... dis 60 %
Hand, Silver Chime..... dis 40 %
Hand, Globe (Cone's Patent)..... dis 25¢ 10¢
Gong, Abbe's..... dis 20¢ 10¢
Gong, Yankee..... dis 20¢ 10¢
Gong, Barton's..... dis 20¢ 10¢
Leon Reading..... dis 25¢ 10¢
Pull, Brook's..... dis 20¢ 10¢
Crank, Taylor's..... dis 25¢ 10¢
Lever, Sargent's..... dis 25¢ 10¢
Bloomfield..... dis 20 %
Lever, R. & E. M. Co's..... dis 45¢ 10¢
Call..... dis 25 %
Cow, Common Wrought..... dis 55¢ 10¢
Cow, Western, Sargent's List..... dis 55¢ 10¢
Cow, Kentucky, Sargent's List..... dis 55¢ 10¢
Cow, Moore's or Dodge's, Genuine Ky., new list:
Nos. 0 1 1/2 2 3 4 5 6 Hog 1 dis 70 %
1 1/2 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000

BELLOWS.
Blacksmith's Common..... dis 50¢ 10¢
Molder's..... dis 25 %
Hand Bellows..... dis 25 %

BLIND FASTENERS.
Francis..... dis 20 %
Mackrell's..... 1/2 doz pairs \$1.00, dis 10 %
Van Sand's Screw Pattern..... 1/2 doz gross, net
Van Sand's Old Pattern..... 1/2 doz gross, net
Merriman's, 10 1/2 in..... new list, net
Zimmerman's, 9 in..... gross \$33.00
Zimmerman's, 10 in..... gross \$30.00

BLIND STAPLES.
Barbed, 1/2 in. and larger..... 1/2 doz 11¢ net
Barbed, 3/4 in..... 1/2 doz 13¢ net

BLOCKS.
Bagnall & Loud..... dis 50 %

BOOTS.
Cast Iron Barrel Shutter, &c..... dis 55¢ 10¢
Cast Iron Chain (Sargent's list)..... dis 60¢ 10¢
Wrought Barrel..... dis 55¢ 10¢
Wrought Square..... dis 55¢ 10¢
Wrt. Shutter, all Iron, Stanley's list..... dis 55¢ 10¢
Wrt. Shutter, Brass Knob, Stanley's list..... dis 55¢ 10¢
Wrought Shutter, Sargent's list..... dis 55¢ 10¢
Wrought Sunk Flush, Sargent's..... dis 65¢ 10¢
Wrought Sunk Flush, Stanley's..... dis 40¢ 10¢
Wrought B. K. Flush, Stanley's..... dis 50¢ 10¢
Carriage and Tire, Common, new list..... dis 80 %
Carriage and Tire, Philadelphia Pattern..... dis 80 %
Carriage Bolts, Clarke's..... dis 75¢ 10¢
Norway..... dis 75¢ 10¢
R. B. & W. Carriage (old list)..... dis 65 %
Tire, American Screw Co's, Phila..... dis 80 %
Tire, "Bay State"..... dis 70 % new list
Eagle Philadelphia Tire Bolt..... dis 80 %
Stove..... dis 70 %
Plow..... dis 75¢ 10¢
Machine..... dis 75¢ 10¢
Bolt Ends and Lag Screws..... dis 75¢ 10¢

BORAX.
13¢ 1/2 lb. net.
BRACES.
Q. S. Backus..... dis 50 %
Barber's..... dis 40¢ 5 %
Spofford's Patent..... dis 50 %
Ive's Patent Braces..... dis 50 %
Common Ball (American)..... dis 55 %
Amidon's..... dis 50 %

BORING MACHINES—WITHOUT AUGERS.
Sweet & Clark upright, 3.60 angular..... 4.40 net
Lawrence..... 3.00 net
Hubbard..... 3.00 net
Phillips, with Augers..... 7.00 7.50 net

BRACKETS.
Shelf, plain..... dis 50¢ 10¢
Shelf, fancy..... dis 55¢ 10¢

BRIGHT WIRE GOODS.
New list..... dis 70¢ 10¢ 10¢ 10¢
BULL RINGS.
Union Nut Co..... dis 55 %
Sargent's..... dis 60¢ 10¢
Humason, Beckley & Co's..... dis 60¢ 10¢

BUTTS.
Wrought Brass..... dis 70 %
Cast Brass, Fast Joint..... dis 10¢ 10¢
Cast Brass, Loose Joint..... dis 10¢ 10¢
Fast Joint, Narrow..... dis 60¢ 10¢
Fast Joint, Broad..... dis 60¢ 10¢
Loose Joint..... dis 70¢ 10¢
Loose Joint, Japanned..... dis 70¢ 10¢
Loose Joint, Jap, with Acorns..... dis 70¢ 10¢
Parliament Butts..... dis 70¢ 10¢
Mayer's Hinges..... dis 70¢ 10¢
Loose Pin, no Acorn..... dis 70¢ 10¢
Loose Pin, Acorns..... dis 70¢ 10¢
Loose Pin, Acorns, Japanned..... dis 70¢ 10¢
Loose Pin, Acorns, Jap'd, Plated..... dis 70¢ 10¢
Tips..... dis 70¢ 10¢

Wrought Iron.
Fast joint, Narrow..... dis 65 %
Fast joint, Lt. Narrow..... dis 65 %
Fast joint, Broad..... dis 65 %
Loose joint, Broad..... dis 65 %
Table Butts, Back Flaps, &c..... dis 65 %
Inside Blind, Regular..... dis 65 %
Inside Blind, Light..... dis 65 %
Loose Pin, Wrt..... dis 65 %
Loose Pin, Light..... dis 65 %
Spring Hinges—
Geer's Spring and Blank Butts..... dis 30 %
Hart Manufacturing Co..... dis 60¢ 10¢
American Spring Hinge Co's..... dis 25 %
Gem Spring Hinges..... dis 25 %
Blind Butts, Shephard's, Nos. 50 and 60..... dis 25 %
Blind Butts, Shephard's, No. 50..... dis 70¢ 10¢
Blind Butts, Shephard's, No. 75..... dis 70¢ 10¢
Blind Butts, Lull & Porter..... dis 80 %
Blind Butts, Huffer..... dis 50¢ 10¢
Blind Butts, Clark's, Nos. 1, 3, 5..... dis 80 %
Standard Lull & Porter..... dis 75¢ 10¢

BOW PINS.
Humason, Beckley & Co's..... dis 55 %
Sargent & Co's..... \$19.70 and 21.40; dis 60¢ 10¢
Hotchkiss..... dis 25 %
BUTCHER'S CLAWERS.
Humason & Beckley Mfg. Co..... dis 25 %
Beatty's..... dis 25 %
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000

CAN OPENERS.
American..... 1/2 gross \$7.50, dis 10 %
New Idea..... 1/2 gross \$15.00 gross
No. 4, French..... 1/2 gross \$2.25, dis 55 %
No. 5, Iron Handle..... 1/2 gross \$7.50, dis 10 %
Sardine Scissors..... 1/2 doz \$7.00, dis 55 %
Sprague, No. 1, 1/2; No. 2, 2.25; No. 3, 2.50; dis 50¢ 10¢
Universal..... 1/2 doz \$3.00, dis 33 1/2 %

Door Mineral..... Same discounts as Door Locks.
 Door Por. Jap'd.....
 Door Por. Plated.....
 Door Por.....
 Furniture Plain..... 75c gross inch, dis 10 %
 Furniture, Wood Screws..... dis 20 %
 Picture..... dis 50 & 10 %
 Hemacite, Picture..... dis 35 %
 Shutter, Porcelain..... dis 50 & 10 %

Melting & Skin'ng, Monroe's Pat. # doz \$4. dis 40 %
 Melting, C & C..... dis 50 & 10 %

Acme Buckeye, Easy & Excelsior, new list, dis 40 & 10 %

Linen Fish.....
 Wire Clothes, Galvanized, 100 feet..... doz \$3.00
 LOCKS AND LATCHES.
 Cabinet, Eagle..... Changes made in list price
 Cabinet, Gaylord..... of some numbers Jan. 1,
 Cabinet, Bridgeport..... 1881, dis 25 & 10 %
 Cabinet, P. & F. Corbin..... dis 40 %
 Trunk, new list, Jan. 1, 1881..... dis 15 & 10 %
 Yale Lock Co., Flat Key..... dis 40 %
 Plate..... dis 33 1/2 %

DOOR LOCKS, ETC.

Bradford.....
 Norwalk.....
 Norwich.....
 P. & F. Corbin..... List prices as revised
 Russell & Erwin..... Dec. 18th, 45 & 10 %
 Mallory, Wheeler & Co..... for cash.
 Nimick & Brittan Mfg. Co.....
 Padlocks—Russell & Erwin.....
 Mallory, Wheeler & Co.....
 Norwich Lock Manf. Co.....
 Wm. Wilcox & Co..... and 2 % for cash.
 Nimick & Brittan Mfg. Co.....
 Wm. Wilcox & Co's Plate Locks..... dis 33 1/2 %
 Yale Lock Manf. Co's "Standard"..... dis 40 %
 Romer's..... dis 25 & 10 %
 Conestoga..... dis 80 & 10 %
 Scandinavian, "Norwich"..... dis 50 & 10 %
 Nimick & Brittan's Burglar-Proof Locks..... dis 50 & 10 %

MALLETS.

Penfield Block Co., Apple, Hickory and
 Lignumvite..... dis 30 %

MEAT CUTTERS.

Dixon's (P. S. & W.) Nos. 1, 2, 3, 4.....
 Perry's, Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10.....
 Woodruff's (P. S. & W.) Nos. 100, 150.....
 Hulse's..... Nos. 11, 12, 13.....
 Kieser's No. 55..... doz \$14 \$17 \$10 \$30-dis 35 %
 Kieser's Gem..... doz \$25 \$30-dis 40 %
 Kieser's No. 82..... doz \$40 \$50-dis 40 %
 Kieser's Monarch..... doz \$45 \$55-dis 40 %
 Beef Shaver, (Enterprise Manf. Co.)..... dis 25 %

MOLASSES GATES.

Stebbins Patterns..... dis 70 & 10 %
 Stebbins Genuine..... dis 67 1/2 & 10 %
 Stebbins Tinned Ends..... dis 40 & 10 %
 Chase's Hard Metal..... dis 50 & 10 %
 Self-Measuring, (Enterprise)..... dis 30 %
 Lincoln's Pattern..... dis 60 & 10 %
 Weed's..... dis 15 %
 Boss Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10.....
 Boss, Japanned Finish..... dis 60 & 10 %
 Boss, Bronze Finish..... dis 50 & 10 %

NUTS AND WASHERS.

Square Nuts..... 8 c off list.
 Hexagon Nuts..... 8 1/2 c off list.
 Washers..... 7 1/2 c off list.

OTHERS.

Zinc and Tin..... dis 60 & 10 %
 Brass and Copper..... dis 50 %
 Malleable (Hammer's)..... doz \$5, dis 10 %

PINKING IRONS.

Per dozen..... 75 cts. net

PLAITING MACHINES.

Astor Plaiting Machine..... each \$15, dis 20 %
 Crown Plaiting Machine..... dis 25 %
 6 in., \$6; 10 in., \$8 each.

PLANES AND PLANE IRONS.

Bench, First Quality..... dis 20 %
 Bench, Second Quality..... dis 25 %
 Molding..... dis 15 %
 Bailey's (Stanley R. & L. Co.) New list, Jan. 1879..... dis 20 & 10 %
 The Stanley (S. R. & L. Co.) new list, January 1879..... dis 20 & 10 %
 Bailey's..... dis 20 & 10 %
 Plane Irons, Butcher's..... \$5.50 to \$6
 Plane Irons, Auburn Tool Co..... dis 20 %
 Plane Iron, Ohio Tool Co..... dis 20 %
 Plane Irons, Sandusky Tool Co..... dis 20 %

PLIERS AND NIPPERS.

Button's Patent..... dis 33 1/2 %
 Hall's Pat. Compound Lever Cutting Nippers, No. 2, 5 in. \$13.50; No. 4, 7 in., \$21 doz, dis 25 %
 Gas Pliers..... dis 50 %
 Cronk's Patent Cutting Pliers, 8 inch \$15.00; 10 inch \$21.00..... dis 35 %

PLUMES AND LEVELS.

Disston's R. & L. Co.'s Pat. Adjustable..... dis 40 %
 Stanley R. & L. Co.'s Non-Adjustable..... dis 60 & 10 %
 Chapin's Patent Adjustable..... dis 60 & 10 %
 Chapin's Non-adjustable..... dis 60 & 10 %
 Standard Rule Co.'s New Adjustable..... dis 60 & 10 %
 Standard Rule Co.'s Non-adjustable..... dis 60 & 10 %
 Pocket Levels..... dis 65 & 10 %

RAIL.

Sliding Door, Wrought Brass..... lb. 43c. dis 30 %
 Sliding Door, Bronze Wrt. Iron..... lb. 43c. dis 35 %
 Sliding Door, Iron, Painted..... lb. 43c. dis 10 & 10 %
 Bara Door..... 1/2 3/4 5/8
 Per 100 feet..... \$2.60 3.60 5.60-dis 10 %
 B. D. for N. E. Hangers—
 Small. Med. Large.
 Per 100 feet..... \$2.10 2.70 3.00 net.

RIVETS.

Iron and Tinned, new list, Dec. 10, 1881..... dis 50 %
 In bulk, new list, Dec. 10, 1881..... dis 45 %
 Copper Rivets and Burrs..... dis 60 & 10 %
 Nos. 7 8 9 10 11 12 13 14 15
 lb. 49c. 50c. 52c. 54c. 56c. 58c. 60c. 62c. 70c.
 RIVET SETS..... dis 40 %

RODS.

Stair, Brass..... dis 25 %
 Stair, Black Walnut..... 60c. doz.—net

RULES.

Boxwood. Ivory.
 Standard..... dis 80 % } dis 50 & 10 %
 Stanley..... }
 Stevens & Co..... dis 70 & 10 % }
 Stevens & Co. Miscellaneous..... dis 50 %

SAD IRONS.

Self-Heating, Charcoal..... doz 9.00 net
 Mrs. Pott's Irons..... dis 35 %
 Enterprise Star Irons, new list, July 20, '82..... dis 35 %
 Comb'd Fluter and Sad Iron..... doz \$15.00, dis 15 %
 Common Sad Irons..... 2 1/2 %

SAND PAPER.

Baeder & Adamson's Flint, 000 to 1 1/2, \$4.50 r'm. m.
 Baeder & Adamson's Flint, 2 1/2 to 3, 5.00 r'm. m.
 Baeder & Adamson's Flint, Assort'd 4 1/2 to 7 r'm. m.
 Baeder & Adamson's Star..... 3.75 r'm. m.
 Baeder & Adamson's Emery r'm. m. \$6.50 to \$11.50
 Bartle's Sand, Flint and Emery Paper..... dis 30 & 15 %

SASH LOCK.
 Clancy's No. 100, per gross..... dis 20 %
 Nimick & Brittan Mfg. Co..... dis 50 %

SASH CORD.
 Common..... lb. 14c. net
 Patent..... lb. 17c. net
 Silver Braided Lake Hemp..... lb. 50c, dis 10 %
 Silver Braid, Lake White Cotton, lb. 50c. dis 10 %
 Silver Braided Lake Drab Cotton, lb. 55c. dis 10 %
 Silver Lake Cable Laid, Bengall Unbleached Hemp, 17 cts..... dis 10 %
 Russian Hemp, 10 cts..... dis 10 %
 Italian Hemp, 34 cts..... dis 10 %
 Samson Braided, white cotton..... dis 30 %
 " " drab cotton..... dis 30 %

SOLID EYES, in 500-lb. lots and over, lb. 1 1/2 c. net

SAUSAGE STUFFERS OR FILLERS.

Miles..... doz \$20, dis 25 & 15 %
 " " No. 15 No. 2, \$21..... dis 15 %
 Enterprise Mfg. Co..... dis 30 %
 Monarch..... dis 40 %

SAWS.

Boynton's Lightning Cross Cuts, new list..... dis 40 %
 Boynton's Circular and Mill..... dis 40 %
 Boynton's Ice..... dis 25 %
 Boynton's Lightning Hand, Panel and Rip..... dis 25 %
 Disston's Circular..... dis 40 %
 Disston's Mill..... dis 40 %
 Disston's Cross Cut..... dis 40 %
 Disston's Hand, Panel, Rip, &c..... dis 20 %
 Hubbard, Bakewell & Co. Circular Saws..... dis 40 & 15 %
 Hubbard, Bakewell & Co. Cross Cut..... 30c. ft.
 Hubbard, Bakewell & Co., One-Man's, X Cut..... dis 40 & 15 %
 Peace Circular and Mill..... dis 40 %
 Peace Hand, Panel and Rip..... dis 25 %
 Peace Cross Cuts..... dis 35 %
 Peace Band Saws, all widths..... dis 10 %
 Webster Cross Cut, with handles..... dis 25 & 10 %
 Griffin's Hack Saws and Blades..... dis 30 %

SAW FRAMES.

White..... doz \$1.05, dis 10 %
 Saw Rods..... \$10 list, dis 10 & 10 %

SCALERS.

Stillman's Genuine, doz \$3.50 and \$5.50..... dis 10 %
 Stillman's Imitation..... doz \$3.25, dis 30 & 10 %
 Common Lever..... doz \$2.00, dis 30 & 10 %
 Leach's..... No. 0, \$3.00; No. 1, \$15; dis 15 %
 Hammer, Hotchkiss..... \$5.50, dis 10 %
 Aiken's Genuine..... \$3.00, dis 50 & 10 %
 Aiken's Imitation..... \$7.00, dis 50 %
 Disston's..... dis 20 %
 Morrill's..... No. 1, \$15; No. 5, \$52; dis 35 & 10 %

SCRAPERS.

Adjust. Box Scraper (S. R. & L. Co.) \$6.50, dis 20 & 10 %
 Box, 1 Handle..... doz \$4, dis 10 %
 Box, 2 Handle..... doz \$6, dis 10 %
 Foot..... dis 45 & 10 %
 Ship, common..... doz \$3, net
 Wilson Mfg. Co..... dis 10 %

SCREW DRIVERS.

Douglas Mfg. Co..... dis 20 & 10 %
 Disston's..... dis 40 %
 Cowles Mfg. Co..... dis 50 & 10 %
 Stanley Rule & Level Co.'s Var. Hds..... dis 50 & 10 %
 Stanley Rule & Level Co.'s Black Hds..... dis 40 & 10 %
 Ratchet..... dis 33 1/2 %
 Clark's Patent..... dis 25 %
 Shephardson..... dis 25 %

SCREWS.

Standard new list, Feb. 15.

Flat Head Bright..... 75 & 10 %
 Round Head Blued..... 70 & 10 %
 Flat Head Brass..... 75 %
 Round Head Brass..... 70 %
 Flat Head Blued (add 1/2 % to net)..... 75 & 10 %
 Brass and Silver Capped..... 40 %
 Japanned Flat Head..... 70 & 10 %
 Coach, Patent Gimlet Point..... dis 75 %
 Coach, Common or Lag..... dis 60 & 10 %
 Bed..... dis 10 %
 Machine, Flat Head, Iron..... dis 55 %
 Machine, Round Head, Iron..... dis 50 %
 Bench, Iron..... dis 50 & 10 %
 Bench, Wood, Beach..... doz \$3.00, dis 10 %
 Bench, Wood, Hickory..... dis 20 & 10 %
 Hand, Wood..... dis 20 & 10 %
 Hand Rail, Sargent's..... dis 60 & 10 %
 Hand Rail, Humason, Beckley & Co.'s..... dis 40 & 10 %
 Hand Rail, Am. Screw Co., list Jan. 1, '81..... dis 70 %
 Jack (Wilson's)..... dis 25 %

SCREEN FRAMES AND MIXTURES.

Standard Window Screens No. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

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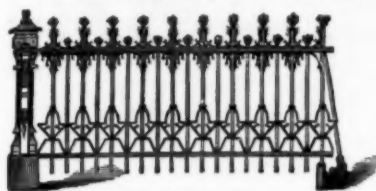
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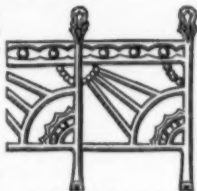
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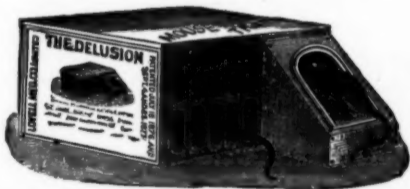
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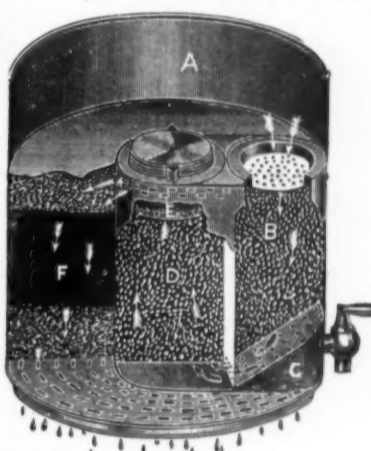
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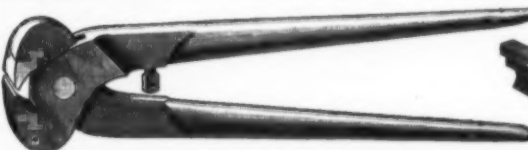
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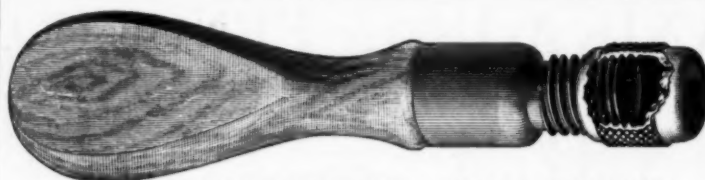
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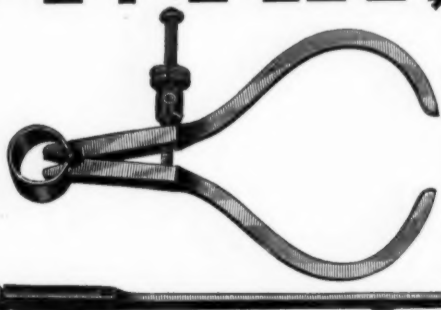
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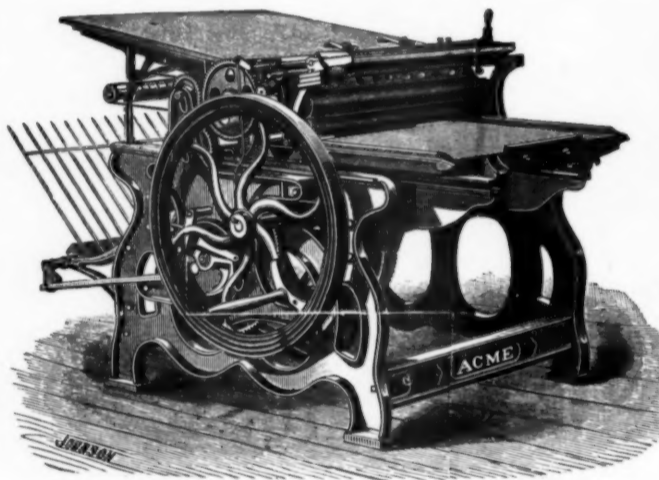
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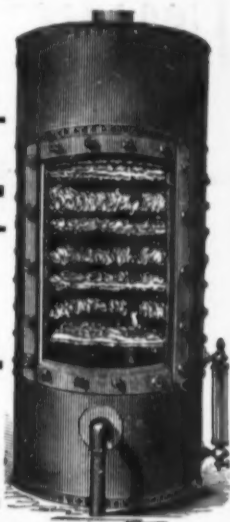
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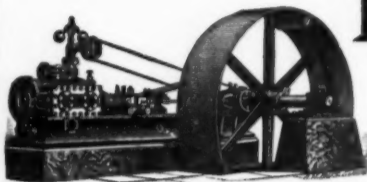
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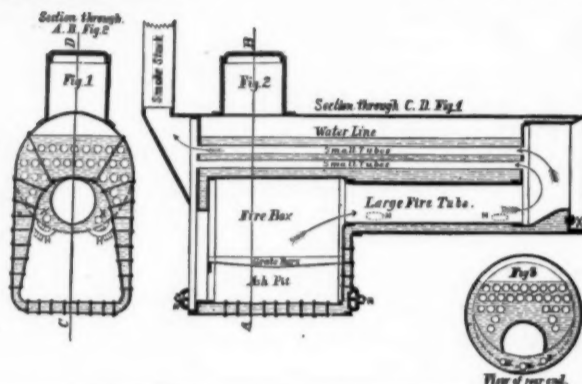
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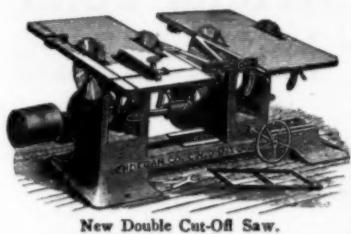
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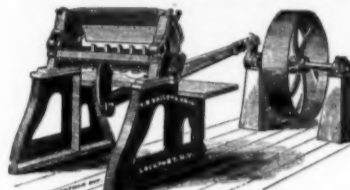
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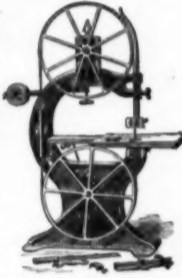
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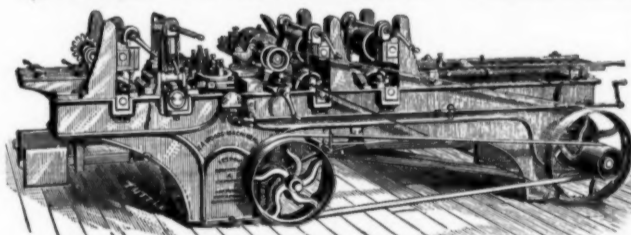
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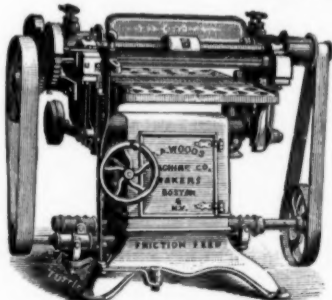
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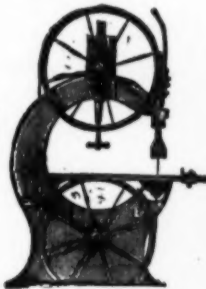


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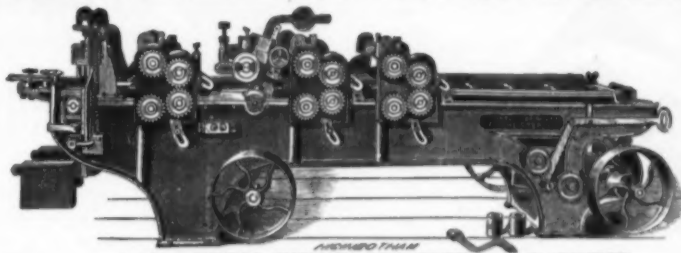


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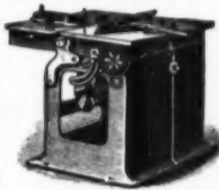


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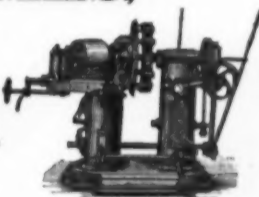
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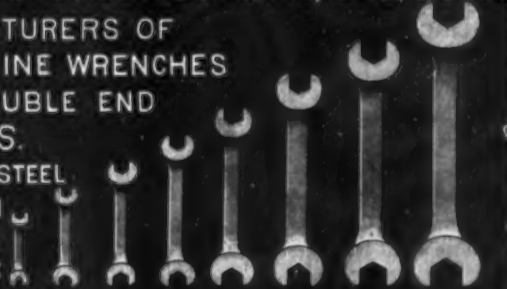
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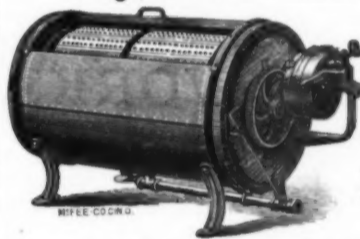
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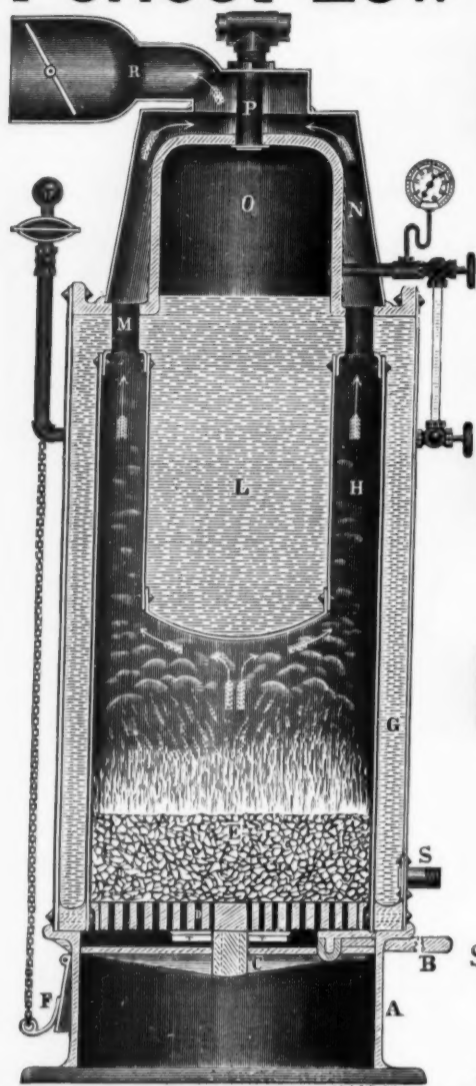
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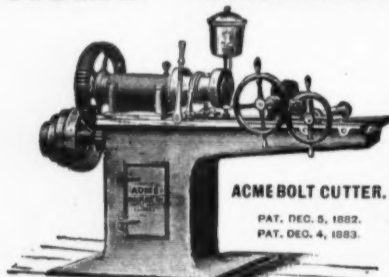
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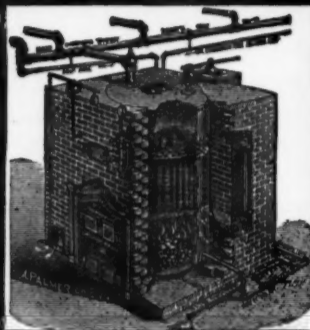
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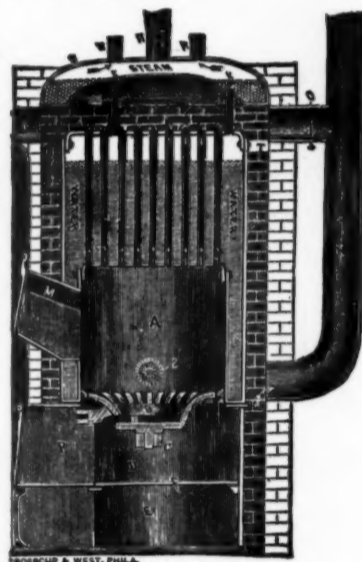
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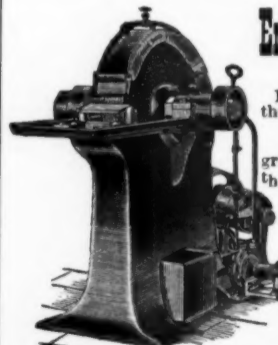


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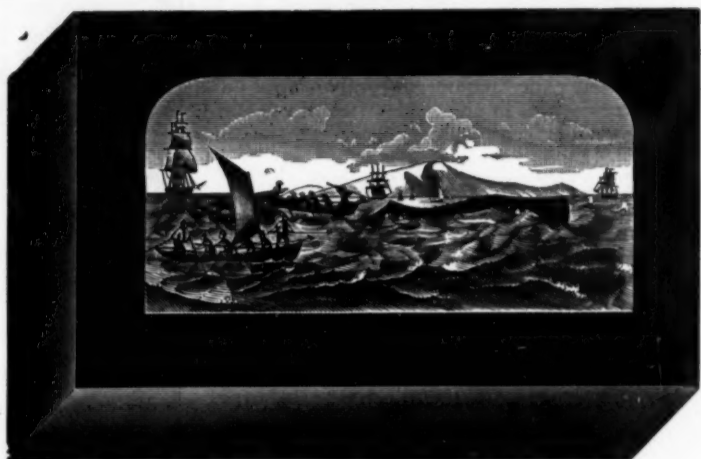
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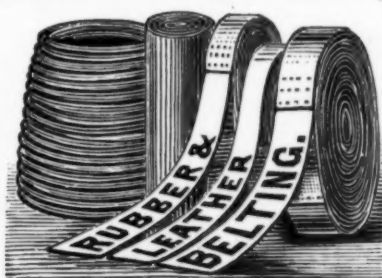
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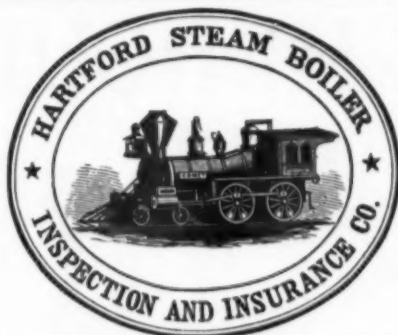
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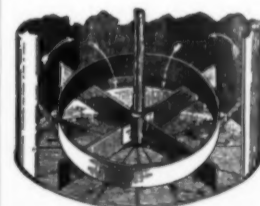
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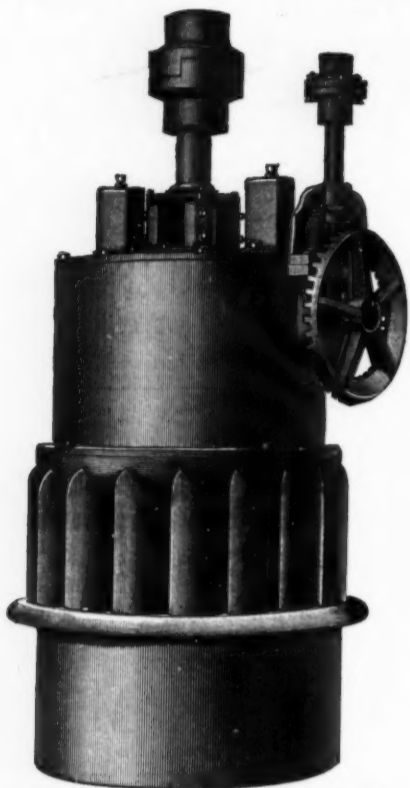
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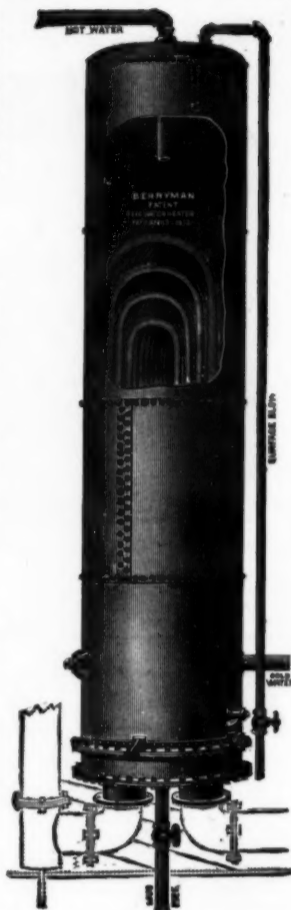
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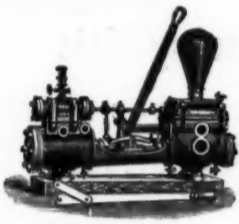
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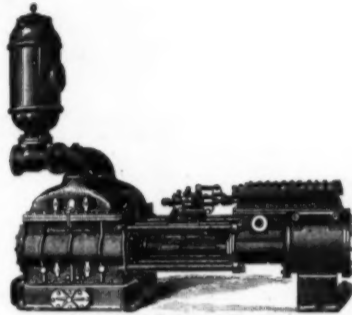


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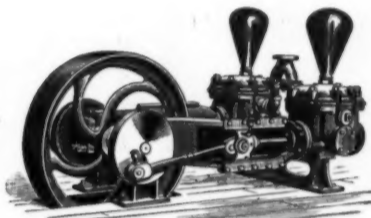


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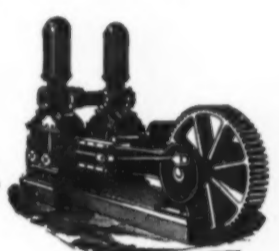


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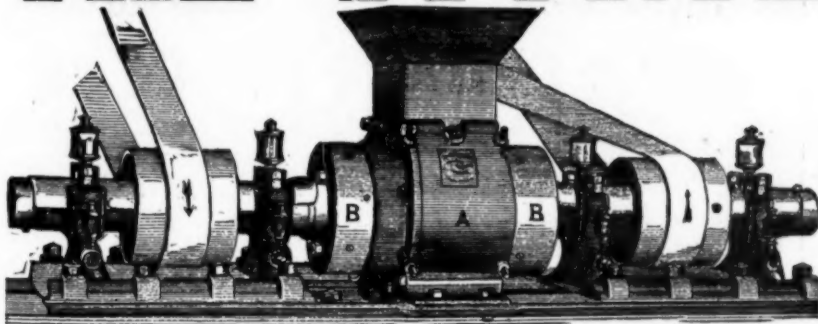
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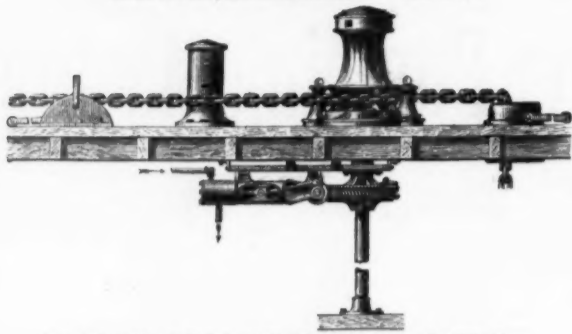
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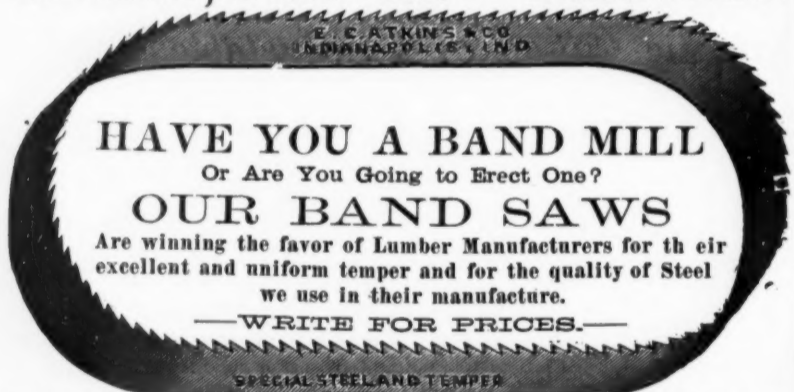
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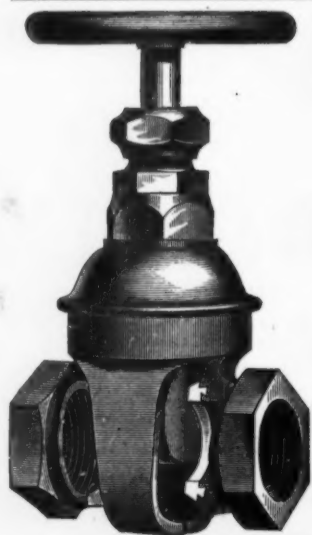
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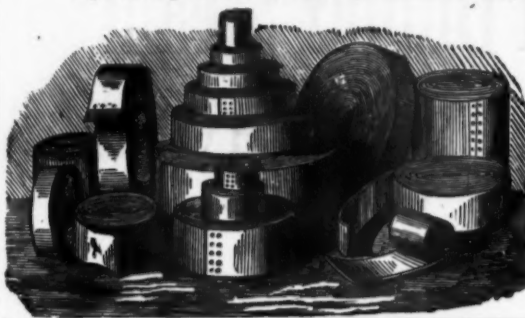
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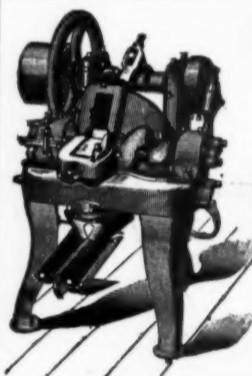
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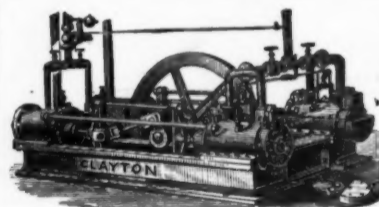
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